



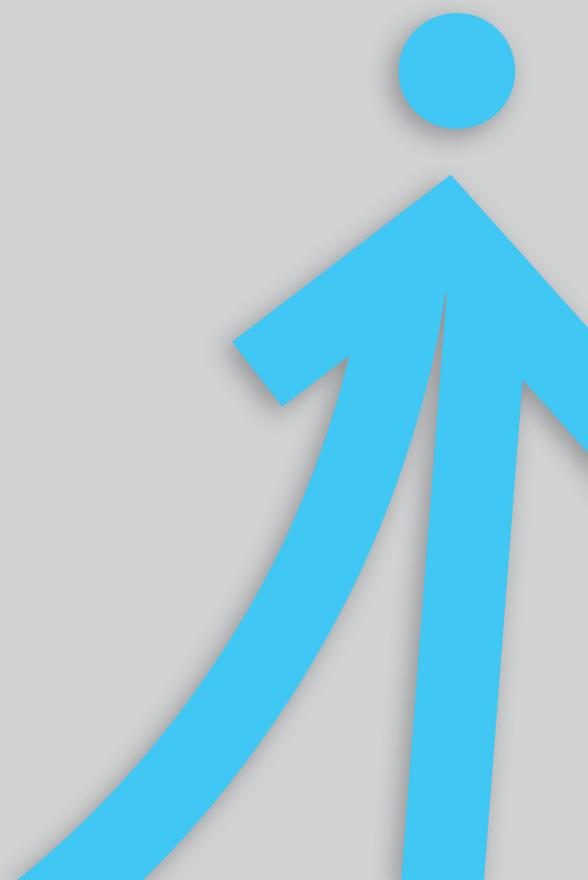
Study  
of Human Capital  
in Poland

2013

# Youth or experience? Human capital in Poland

The report concluding the 3rd round  
of the BKL Study in 2012

Edited by  
Jarosław Górniak



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NATIONAL COHESION STRATEGY



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Ladies and Gentlemen,

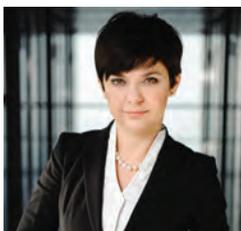
the spring months of 2012 – the time of the studies of the 3rd round of the Study of Human Capital in Poland (Bilans Kapitału Ludzkiego, BKL) were difficult for the labour market in Europe and in Poland. The constant increase of unemployment that we have observed since 2009 remains not without influence on the behaviours of employers and jobseekers. The first approach the question of increasing employment very cautiously: as a rule, maintaining its previous level or reducing it, while the young graduates entering the labour market experienced major difficulties in finding employment. Thanks to the complex and in-depth observation of the labour market that we have conducted for three years already as part of the BKL, we are capable of perceiving that the problems are set deeper than only in the current market conditions. Although the Polish labour market is the market of the employer, entrepreneurs will still encounter difficulties in finding a good employee; the reason being the mismatch of candidate competencies and qualifications with employer expectations.

In the publications we are delivering, we devote plenty of attention to two groups: young school leavers who entered the labour market, and the older people. On the one hand, the European Union takes successive steps to provide employment guarantees for the young, focusing the attention of member states on this social group, and on the other, European societies are ageing, and the need to keep mature employees in the labour market as long as possible has long been indicated. Which of the groups should become the priority for the public policies?

We encourage you to become familiar with the results of the studies presented in this report. Its publication coincides with the work on the shape of operational programmes and the new programming period. The results of the BKL Studies show the areas that require action, and in which all the parties responsible for the development and quality of the labour market in Poland should focus their attention.



Professor Jarosław Górniak  
Jagiellonian University



Bożena Lublińska-Kasprzak  
President of the Polish Agency  
for Enterprise Development



# Foreword

The year that has passed since the publication of the previous report, summing up the second round of the studies conducted as part of the Study of Human Capital in Poland (BKL) project brought further aggravation of tensions in the labour market in most OECD states, unfortunately including Poland. We are far from such a dramatic level of unemployment as is experienced by South European states, and especially Spain and Greece, and was experienced by Poland early in the 21st century. Nevertheless, beginning with 2009 we have dealt with a systematic increase of unemployment. Conscious of problems with finding experienced staff, employers try to maintain employment even in the conditions of the difficult economic situation and uncertain future. In such a situation, young and inexperienced graduates face growing difficulties in seeking employment. The annual cohorts that managed to make an easy entry into the labour market in the circumstances of an economic boom retained employment. The school leavers and higher education (HE) graduates in the successive years of falling economic growth find employment increasingly difficult. This is corroborated by the data collected for the needs of the BKL project presented in Chapter Four.

Unemployment among graduates grew far faster than among the totality of people at working age. One of the popular explanations promoted in media debates was to lay the blame for the status quo on the graduates, or, to be exact – on their poor preparedness. Slogans that HE institutions “educate the unemployed” and that “it makes no sense to learn” turned up, as education supposedly does not translate into opportunities in the labour market. It is true that higher challenges must be set for schools and HE institutions, and teaching curricula always require improvement as does the quality of their implementation. Similarly, our studies also recognised competency deficits which people seeking employment bring into businesses. Nevertheless, laying the burden of entire responsibility for unemployment on the system of education is a simplification strongly detached from reality. If these were the schools and HE institutions that decided about the employability of young people, the situation in which the number of unemployed young is suddenly rising, as is the case in Spain, would have to be interpreted as a symptom of a sudden breakdown of the education system, which exposes the absurdity of such a one-sided claim. What is required besides the stimulation of global prosperity, are the reinforcement of the economic freedom, and also reduction of the encumbrances and uncertainties in running business created by the state apparatus. Changes in education are necessary, yet their results must not be expected soon. Moreover, on their own, they will have no impact on the situation in the labour market.

The mechanisms responsible for the situation in the labour market are set deeper: both in the current economic situation, and in the structure of economy and its transformations. When there are no new jobs emerging, young people leaving schools are in a naturally worse situation in the market, as – as a rule – they have no professional experience and the specific competencies gained on the job that are a significant element of the human capital. Graduates share this situation with other groups, whose longer period of exclusion from the labour market result in the loss of a significant part of competencies. This group includes, among others, the long-term unemployed and the mothers who try to return to the labour market after a longer period devoted to the raising of children.

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The more jobs are lost in the national economy, the more strongly the situation of these risk groups deteriorates. This simply results from the business calculation of the investments necessary to prepare an inexperienced employee and the opportunity costs of the time required for such an employee to reach target labour productivity. The results of the BKL Study clearly show that nine out of ten employers seek new staff only for the existing jobs, and not for opening new positions. This favours those who are capable of relatively quick takeover of duties, as they have not only knowledge, but also practical skills and experience at their disposal.

In the successive round of the BKL, we acquired results similar to those from the previous years, pointing to the fact that employers seeking employees encounter problems while looking for ones who have adequate occupational and social competencies, and also the skill of organising the work. Listed among hindrances in employment are also lack of motivation to work and exceedingly high expectations concerning remuneration when compared to the competencies offered. Young age does not necessarily constitute an asset in the labour market. Young people can count on certain preferences while being employed in services, yet not on professional or managerial positions. Well educated graduates will be able to count on quick careers in professions requiring high competencies, yet on the condition that the national economy will dynamically create new jobs, in whose case, such competencies will be necessary. There are few such jobs opening in Polish economy, and as far as innovativeness is concerned, the country continues to remain at the bottom of OECD ranking of states. This is a particular "vicious circle", as opening new knowledge-based jobs in modern economy requires its saturation with high class, innovative professionals.

The accessibility of technologically advanced jobs influences also the possibility of education of young professionals. It is highly desirable that secondary school and higher education students could hold their practical internships in modern businesses. The problem with organising such internships is, however, not only the result of the ineffectiveness of institutions of education, but also lies with businesses themselves. It is so as the aura of the crisis does not favour the involvement of businesses in internships and residencies for young people, although – taking into account the cyclical nature of the market – now is the time to get the human resources ready for a period of prosperity, by becoming involved in their practical education. This, however, requires a long-term and strategic perception and free resources, which are less accessible under the circumstances of weakening business activity.

Popular recently in the media is the slogan that "institutions of higher education educate the unemployed". It, however, fails to find corroboration in facts, especially if we are going to interpret it comparatively, juxtaposing the situation of young people with various levels of formal education. Such an analysis is provided in the last chapter of this report. Journalists and commentators frequently point to the fact of a growing share of people with higher education among the registered unemployed as an alleged proof for the truth of the repeated slogan. This results from an erroneous interpretation. On the one hand, the total unemployment rate among the graduates of schools of various levels is growing for the reasons discussed above. On the other hand, the proportion of people with higher education in the youngest age group is decidedly higher than in entire population of people at the working age. This, therefore, must find a reflection in the growing participation of people with higher education also among the unemployed. Our report shows the share of the working and the unemployed in the individual categories of young graduates, which renders best the impact of education on market success. One must firmly underline the fact that the data clearly show that the graduates of the highest level of formal education have greater odds of employment. In the case of women, graduates with a master degree are decidedly better off in the category of employability over their peers with lower, especially basic or lower, levels of education. Therefore, young people must not be discouraged from gaining education by the use of a false argument that they will find it easier to find employment without a better education.

Emphasising the statistical advantage of the graduates of second cycle studies over people with lower levels of formal education, we do not refer here to the question of adequacy of education to the needs of the labour market or satisfaction of graduate aspirations concerning the remuneration or the nature of the job, although in our reports, we present results concerning these aspects as well. One needs to stay cautious in formulating conclusions based on the analysis of the remuneration-related situation of graduates in their first job. In normally operating economy, the career path that starts on lower positions with not-too-high

remuneration so as to be promoted on the grounds of regularly developed competencies, including those resulting from on the job experience, is natural. Formal education may even fail to give an advantage at the first job, yet in many situations its lack is the factor that renders promotion more difficult. A higher level of formal education plays also informative functions for employers, who can use it to distinguish the people who proved greater capacity for learning and motivation for promotion. Gradually, also the question of which HE institution the individual graduated from will acquire an increasing significance. Bordering on a truism, these observations must, however, be clearly pronounced, as a wave of an inexplicable fashion for criticising education seems to overshadow obvious facts. This is why we decided to devote a separate chapter, written by Magdalena Jelonek and Dariusz Szklarczyk, to the situation of young graduates.

This time, we also dedicated another chapter to the situation of the older people. The ageing population has been the subject of discussion far longer than problems with the employment of the young. This is why the challenges in this aspect are better catalogued, and the diagnosis is fuller. Nevertheless, we considered that showing the current status quo of the more mature people of working age in the labour market is justified by the gravity of the problem, especially in the light of detailed results. Konrad Turek presents an in-depth analysis of this area based both on the results of the BKL and various international sources, as the problem of ageing population does not belong solely to Poland. The chapter refers also to implications significant for public policies. Worthy of attention is the following claim that it makes: "From the point of view of today's policy, middle aged generations are very important. It is too late for a radical change of today's seniors. It is the manner and quality of ageing of today's middle-aged women and men, and especially the generations of the demographic boom, that will be of key importance for the situation of our country in the coming decades." This is another argument supporting the claim presented already earlier by our team: focusing the attention only on the group of 50+ is illusory from the point of view of long-term social and economic effects of population ageing; one also needs to deal with the younger age group. To express it symbolically: the Universities of the Third Age may have major impact on the quality of life of the older population; yet what we need from the point of view of development policy are the "universities of the second age". Obviously, the question is not limited to universities only, hence the emphasis on the symbolic, gauge-like character of such projects.

The cohort of older employees is internally differentiated. We most often follow the knowledge based on general indicators that do not portray the nature of this heterogeneity. Similarly, the situation of the entire 50+ segment is changing. The age of sudden increase in labour market exit shifted slightly, among others as the result of reforming the entitlement to pensions and old age benefits, and introduction of new principles of moving into the earlier bridging pensions ("bridge retirement"). We will also be gradually experiencing the impact of the new logic of the pension system, which motivates to longer activity in the labour market. This will obviously clash with employer attitudes towards the older staff, described in Chapter Three, resulting from the expected lowering of labour efficiency at a later age. What will be necessary is the modern "age management", which needs preparation: through development of concepts, provision of knowledge, and education of managerial staff. Studies must be conducted as to what works in other countries, solutions must be tested, and results of such pilot projects – disseminated. Researchers, in turn, must be furnished with skills letting them conduct and analyse such tests in a professional manner.

The situation among the young and older employees generates serious implications for public policies. As a society we are in a difficult position. The long-lasting economic problems in Europe and the accompanying uncertainty and weakening of the economic growth in Poland have an increasingly strong impact on the labour market. Bereaving a large share of young people of the opportunity to experience work curtails the assets of human capital available for the economy. At the same time, successive annual cohorts of the post-war baby boomers enter retirement age. In the coming years, the peak of that process will coincide with the impact of the baby bust, which will reduce the inflow of young people to the labour market. Pushed off the normal path of professional development today, graduates may become "hardly employable" in the future, even in the case when staff will be needed. Some will find a place abroad, and in the case of the others – major outlay for training complementing their competencies will be required. Therefore, it seems sensible to embark on preventive – bridging – measures that will make it possible to retain and even improve the competencies of the young people, e.g. by providing them with practical experience at a time when jobs are counted among scarce goods. Yet it would be pointless to invest hopes

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in such an intervention in itself solving the problems of unemployment among the young. The more so, as the activities stimulating the employability of the young are planned simultaneously with actions supporting the retention of employment in businesses experiencing problems, and incentives for extending the time of professional activity. In an economy where the number of jobs does not increase due to the poor economic situation and deteriorating competitiveness, this cannot bring positive effects for everyone at the same time. Under the conditions of recession or stagnation, the three target groups of active labour market policy defined above, i.e. young graduates, employees of businesses in difficult position, and the older employees, remain one towards another in the circumstances of a zero-sum game: the success of one automatically deteriorates the situation of the others.

The way out from this trap is to speed up the economic growth and the accompanying increase in the number of jobs. They will be established when the national economy is competitive and ready to react to a positive turn of demand in world economy. This calls both for institutional reforms that will lower the transaction costs and increase the certainty of business, and appropriate preparation of the human resources. A faster growth based on competitiveness will mean the establishment of new types of business activity and new types of jobs, to which there will already be no staff prepared. This, in turn, may lead to structural unemployment on a broad scale, which will be accompanied by a serious deficit of employees. Already now, with the employer market, we face the lack of appropriate candidates in the process of recruitment. The mismatches in the labour market are of various nature, and concern competencies, remuneration, motivation, and geography. With an increase of demand for employees, such an incompatibility may turn into a barrier for growth. This is why one needs to react in advance to a crisis in the labour market, i.e. to become ready for the future growth by investing in the development of human capital. It no longer suffices to provide access to training or internships, it is not enough to open fields of study with attractive, technological names. One needs to make quality the focus. Let's not listen to the voices saying that it does not make sense to learn, but instead let's develop conditions for both secondary school and academic students, young graduates, and experienced staff to gain the necessary competencies at the highest level possible. Wherever in the field of education we are incapable of quick development of our own solutions, they must be imported through the content of learning and teacher training, and via organisational concepts. The significance of capital – state-of-the-art machinery, devices, technology, and organisational and logistics solutions – is on the increase in contemporary economy. This capital will be deployed wherever it is easiest to find employees capable of ensuring its productive use. Poland needs to have such employees in assorted sectors, just like it has been capable of providing them e.g. for the business processes outsourcing (BPO) sector.

The key challenge in the coming time will be building support for the “second educational leap” that is ahead of us. The malcontents who complain that we have an overly educated society and that it would be a mistake to allow a lively increase of the number of people with higher education are not right. It is on the contrary: a great, spontaneous shift towards gaining higher level of formal education – “the first educational leap” – was one of the most important civilisational processes in Poland of the transition period. Those who invested in their education (or that of their children) are probably far from regretting that. The results of research being part of the BKL project corroborate that even in the current difficult situation, the choice of education is an option that pays. Can we now stand up to the challenge of the second leap? Can we assure a radical qualitative progress in education at all the levels, preserving its accessibility, and even expanding it to the “second age” segment. These questions still remain open.

The studies conducted as part of the BKL project are coherent with the debate about the conditions of development of Poland. We count on the fact that by providing interesting and useful data acquired during the study, we contribute to focusing the attention of significant social problems and help to work out concepts of public policies, helping to solve them.

*Jarosław Górniak*

# Summary

## Chapter One

### Balance in the labour market: employer needs vs. job seeker potential

- Much like a year and two years ago, more or less 17% of Polish employers sought employees: in the autumn of 2010, there were approximately 560,000 vacancies, in the spring of 2011 – approximately 590,000 vacancies, and in the spring of 2012 – approximately 610,000 vacancies. In conjunction with the growing level of unemployment in the country, one could say that stagnation is the characteristic feature of the Polish labour market, and the situation is unfortunately deteriorating.
- Employers from developing (i.e. ones that demonstrated introduction of some innovations, positive employment balance, and increasing profits) and large (in terms of volume of employment) companies, and ones dissatisfied with the competencies of the people in current increases employment sought employees more often.
- In the past three years, employers sought primarily three categories of staff: skilled workers (especially construction), sales workers, and professionals (teaching, and business and administration; and engineers of various categories). Such a structure of demand was fairly stable, although insignificant fluctuations were visible in spring, when the demand for worker occupations was on the rise.
- Juxtaposing employer needs with supply, we can point to a number of areas that are a source of potential problems in the labour market. The largest shortages of employees were present in worker occupations, which was especially true about skilled construction workers, and to a smaller degree in the case of plant and machine operators (mostly drivers) and professionals. In turn, the occupations in which a surplus of people eager to work was recorded (accounting for employer needs) included sales workers, clerical support workers, and labourers in mining, construction, manufacturing and transport.
- Many employers complain regularly about problems related to recruitment of people to work. Every year, three in every four employers seeking additional people to work pointed to such difficulties. Their main reason were the failures to meet the requirements set up for the candidates, especially those concerning the competencies in hand. Looking at the opinions of the employers, candidates were usually short of occupational (i.e. related to the specific nature of working on individual posts), self-organisational (self-organisation of work and showing initiative, timeliness), and interpersonal (contacts with other people) skills.

## Summary

- Having compared two groups of people, that is the ones who sought employment in 2010–2012, and those who managed to find employment, we can state that, generally, in the fray for finding work, the relatively younger people are in advantage, which is especially visible in the case of worker occupations. An exception from this rule are only managers and professionals. In the group of professionals, age does not seem to play a significant role, and slightly older people are even in an advantageous position among managers.
- Women find it slightly more difficult to become employed than men. Women accounted for half of all the jobseekers in 2010–2012, while their share among the people who found employment was 43.8%. This results, at least partially, from the fact that more than every other woman sought employment in clerical occupations, and as shop assistants and service workers, i.e. in the occupational categories with oversupply of candidates to employment.
- Education helps successful competition for jobs. In sales and services sectors, and also in worker and operator (driver) professions, education (at least secondary), clearly improves the odds of finding a job, while in the categories of clerical support workers and technicians and other associate professionals, people with higher education are advantaged. The data prove that people with better education as a rule seek employment in categories standing higher in the ISCO hierarchy, treating the work in the “lower” categories as temporary.
- Professionals and people running their own businesses belong to the group that moves out from the labour market at latest age (which is true both for men and women). Moreover, the longest average history of working for the current employer (12 years) is a characteristic of professionals. In turn, operators and skilled workers (and also unskilled male workers) are the ones to finish leave labour market earliest.
- The analysis of data for the people who changed their situation in the labour market in 2010–2012 points to a clear difference between the first four in the last four ISCO occupational categories. Having finished working for one company, approximately every other manager, professional, technician or other associate professional, and office clerk started employment (not necessarily immediately) in another. In this aspect, the situation of the people who finished working as unskilled workers was the poorest: such a move frequently coincided with moving to unemployment or labour market exit.

## Chapter Two

### Professionals in the labour market. Employer requirements

- In the period encompassed by the studies of the third round of the BKL, professionals were among the most frequently sought occupational categories in the case of new staff recruited to work (they accounted for approximately a fourth of all the people additionally sought, and – if the technicians and other associate professionals were to be included – the group accounted for approximately 40%).
- Professionals were more often sought by employees from developing firms, with high employment, and operating in professional services, education, healthcare, and social work. The type of professionals needed depended on a number of factors, including sector, and the size of the business. Large employers sought mostly business and administration professionals, engineers, and health professionals. The specific nature of the sector enforced a demand for professionals adequate to their needs (e.g., the employers from the educational sector sought primarily teaching professionals).

- The requirements that employers set for candidates to professional occupations differed greatly from those formulated towards other staff. Nevertheless, the greatest differences concerned the way of recruiting professionals: what mattered here was whether the specific requirements were expressed in job offers or declared in interviews. The exception were competency requirements, in their case there was a full consistency between the types of recruitment examined.
- In the case of job offers (positions wanted), the most important criterion for selection is the professional experience of the candidate. Significantly, it must be remarked that:
  - if a candidate was required to have a BA/engineer degree (first cycle higher education) or there were no requirements concerning education, the candidates were automatically expected to have a longer employment history on a given professional post
  - if, however, a candidate was required to have full master degree education (second cycle higher education), shorter employment history was expected.
- In opinions expressed directly, employers did not much emphasise the importance of the educational experience in candidates for professionals (as compared to other job groups), paying attention rather to the level of education and knowledge of foreign languages. Nevertheless, the greatest experience was required from physicians and nurses (nearly 3-year) and engineers (exceeding 2 years). The lowest expectations in this area concerned IT professionals, and teachers and educators (approx. 1.5 years).
- Generally required from the candidates was higher education, at least at baccalaureate level. Yet a change in employer preferences was observed as concerns the level of higher education, in job offers they pointed to the need of having second-cycle higher education, while in direct declarations, the first cycle of higher education was sufficient. An exception were specific occupations, i.e. physicians and lawyers, in whose case people with bachelor degree are still unacceptable. Recorded simultaneously in in 2012 was a drop in the level of approval for bachelor and engineer degrees if recruitment was conducted through job offers.
- The level of command of foreign languages among candidates to professional positions is primarily verified during the direct interview with the employer. In the process of recruitment through job offers, this criterion of selection concerns approximately 50% of offers addressed every year to this job group. The knowledge of a foreign language was especially useful in the case of IT professionals, and business and administration professionals. The languages mentioned most often were English, German, and French.
- Least important in the case of recruitment to professional positions was the sex of the candidate: approximately only a third of employers had preferences concerning the professional being a woman or a man. Nevertheless, certain regularities can be shown: men were often sought as engineers, and women as teachers and business and administration professionals.
- Required from candidates to professional positions were primarily three types of competencies: interpersonal, self-organisational, and occupational. It is worth noting that, unlike the totality of candidates sought, what was required from professionals were competencies of general rather than specific, occupational kind. Nevertheless, a marked increase of significance of those very “narrow” occupational competencies – strongly differentiated depending on the specific features of the post that the candidate was applying to – was recorded.

## Chapter Three

### The ageing of the population as a challenge for economy, labour market, public policy, and citizens

- By 2050, Poland will have lost 4 million citizens, and the old-age dependency ratio, i.e. the ratio of people aged 65 and over to people aged 15–64, will grow to 53%, making Poland one of the oldest countries in Europe (with a third of its population being over 65 years of age). On the other hand, labour resources will have diminished by nearly a third (7.5 million people).
- Currently, the employment rates for older generations of Poles are among the most disadvantageous throughout Europe. In 2011, according to the BKL data, the employment rate for men aged 50–64 was 49%, compared to the average for the entire European Union at the level of 65%. In case of women aged 50–59, it amounted to 48%, with the EU-27 average of 63%. In 2012, the rates for Poland amounted to 50% and 51%, respectively. The last three years have brought a visible increase in the employment index in the five-year preretirement period: among men aged 60–64, from 26% to 30%, and among women aged 55–59, from 30% to 41%. This among others is related to the liquidation of a large proportion of retirement privileges, which delayed the average age of transition into retirement.
- As far as the formal level of education is concerned, we observed a very high differentiation between the successive generations of Poles. Today, the lower education of the older generations is frequently their particular weakness. The data gathered in the BKL Study proved that as many as 37% of today 20-year-olds either completed higher education or were still studying. Among the 30-year-olds, only every third person held a higher education diploma, among the 40-year-olds – fewer than one in five, yet among the 50-year-olds – only every tenth. A higher level of education means a greater probability of having employment, and labour market exit at a later age. One must, however, remember that the division into educational categories includes also the position and type of work performed as well as salaries that provide a far more significant factor for the situation in the market at an old age and the decision concerning the discontinuation of professional activity.
- What we observe is a systematic drop in educational and self-educational activity beginning at around 45 years of age. In line with the results of studies conducted as part of the BKL, every third Pole aged 50–59/64 has never participated in courses, training, workshops, or internships. Yet it is not the age that is the decisive factor for participation in lifelong learning. Among the basic social and demographic features, it is the education (which also contains the type of work performed, and the number of other correlated features). Participating in courses and training were primarily people with higher education. Among the working 40- and 50-year-old women with a higher education diploma, training activity was even on the rise.
- Clearly visible among the unemployed and the inactive is the significance of limitations related to the age and health status growing in the successive age groups. For a vast share of the older people with lower education (who account for nearly 60% of people aged 50–59/64), loss of employment at the age of 50 or more very often means the end of professional career.
- Age is one of the significant candidate traits taken into account in the process of recruitment, while employers prefer younger, or middle-aged employees: from 20+ to just over 40. Yet every other employer would be likely to employ their 50+.
- Preferences concerning the age of the candidates were most often declared in the case of unskilled labour (in as many as 92% of cases, following the aggregated data from 2010–2012). They were not significantly less frequent in the case of candidates for operators and assemblers, service workers, and skilled workers. They were mentioned less frequently in the case of professional and managerial jobs, although also here special preferences were declared in 7 out of 10 com-

panies. The share of respondents declaring candidate age preferences visibly dropped with the increase of the size of the business. In companies employing up to 9 people, they were present in 80% of responses, from 10 to 49 people – in 74%, from 50 to 249 – in 62%, and in companies with employment over 250 – only in 56%

- Analysing a more extensive spectrum of various forms of activity, including lifelong learning, civic activity, and recreation, it goes without saying that the older generations of Poles are generally very passive. Yet in further years, we can expect a gradual extending of the period of economic activity and delaying the average age of labour market exit. More importantly, the successive generations of Polish people will be entering the old age with entirely different experience, capacity, potential, and aspirations.
- The policy of the state should not limit itself to the regulation of the pension system and increasing the age of labour market exit, but also aim at facilitating an earlier start in the labour market to young people, activation of the inactive, and development of lifelong learning, all of which allow an adjustment in supply and demand of competencies in the labour market, and support the multi-aspect process of active citizen ageing.

## Chapter Four

### Graduates of upper secondary schools and HE institutions in the labour market

- While analysing the labour market situation of upper secondary school leavers who do not continue education in the formal system, not only the customary differentiation between the general secondary and other schools must be taken into account, but also the profile of education within the same type of school (e.g. worker and service occupations after a basic vocational school):
  - if the graduates of the lower secondary school do not intend to continue education at a higher level in the future, it “pays best” while choosing the upper secondary school to select a technical school, or – to be more precise – an occupation that belongs to the group of technicians and associate professionals; the people who selected such a path of education have relatively fewer problems with finding jobs, and relatively highest revenue, when compared to other upper secondary school leavers
  - selection of worker occupations at the basic vocational school gives opportunities for relatively quick finding of employment and better pay (compared to other groups of upper secondary school leavers); there are, however, also such worker occupations where finishing school does not guarantee a privileged position in the labour market
  - analysing the situation of upper secondary school leavers who entered the labour market in the last 10 years, it is visible that relatively worst off are the graduates of service occupation courses in basic vocational schools (e.g. cooks, hairdressers, salespeople).
- In the period from 1 to 3 years after leaving the lower secondary school, that is at the stage of taking the first steps in the labour market, men find it easier to find employment.
- General upper secondary school leavers may gain most – which is actually in line with the assumptions concerning the operation of this type of schools – while continuing education at higher level. If this is not the case, the first steps in the labour market are as a rule more difficult than in the case of people who selected other paths of upper secondary education. An alternative to continuing education at higher level is completion of a post-secondary course. With this option, the situation of former general upper secondary school students can improve after a few years in the labour market.

## Summary

- Graduates from higher education are in a better situation: although their situation in the first two years after graduation is not enjoyable (high unemployment rates), it improves significantly with the years of presence in the market.
- For the fresh graduates (up to 2 years from leaving education) the situation in the labour market at the moment of graduating from higher education is an extremely significant factor that influences the odds of finding employment. When the market situation deteriorates, they are the ones who lose most, which is probably linked to the freezing of staff enrolment (mostly recruitment of new staff) in businesses. In the later period, the market position of higher education graduates is more strongly influenced by the remaining factors, less dependent on the market condition.
- People with engineer degree have a fairly good position in the market: in their case, graduation from master degree studies gives relatively small profits (both in the context of employability and of value of remuneration at the start). Decidedly poorer is the situation of bachelor degree holders: in their case, graduation from master degree studies is a decision that brings major gains (increased odds of having a job, higher pay, and also increased opportunity for performing occupations reserved for professionals).
- The difference in the labour market situation of graduates of engineering and non-engineering fields of study disappears at the level of second-cycle studies. No significant difference favouring young engineers was recorded (either in the context of odds of having work, or of value of remuneration).
- A factor that makes an impact on the market opportunities of higher education graduates is the field of completed studies. The fields defined by the NCBIr as “strategic” in most cases guarantee a good market position to their graduates, yet not all the fields of study classified into the group guarantee it. Among the “strategic” fields of study, there are ones in whose case, a similar (and in some cases higher) percentage of unemployment is observed as among the graduates of “mass” fields of study.

## Chapter One

*Marcin Kocór, Szymon Czarnik*

# Balance in the labour market: employer needs vs. job seeker potential

## Introduction

The studies conducted as part of the Study of Human Capital in Poland (BKL) project make it possible to take a look at the labour market in Poland both from the demand (employer) and from the supply (employee) side, accounting for the educational environment established by the system of (state and private) education, and training firms and institutions. Although there are studies in Poland that give a more extensive review of certain aspects of the labour market (e.g. the BAEL study), yet a unique feature of the BKL project is the integrated nature of the study, based on a package of interconnected research tools, addressed to various stakeholders in the labour market.

Thanks to the juxtaposition of information about current needs of employers and the attributes of current and potential employees, one can attempt to make a balance of human capital and to identify areas of mismatch. The starting point for achieving this goal is the definition of competences required by the employers from the staff sought. If there is no sufficient supply of workforce meeting these requirements, we speak of skill shortage [see: McGuinness, Bennett, 2006].

It makes sense to explain at the outset that the project understands competencies as knowledge, skills, and attitudes related to the performing of specific occupational tasks [Hogarth, Wilson, 2001]. How they were acquired and whether they are corroborated through validation procedure does not matter. Qualifications, in turn, are knowledge and skills that were corroborated through formal validation procedure and are certified with an appropriate document, e.g. a driving licence or a language certificate.

Seeking people to work in a given profession, employers define requirements concerning not only the type of competencies required, but also their level. The unfulfilled employer expectations in this area are known as the skill gap or mismatch. Such a gap is present when candidates to work in a given occupation have competencies that are too low compared to employee requirements or are of a type different than expected at a given position. Competency mismatch concerns also those already in employment, and can be the result of competencies shortage, if – due to the lack of people with required competencies – employers are forced to employ people with other (lower or higher) competency resources.

## **Balance between employment needs and the potential of the labour market**

Competency shortages and gaps lead to upsetting the balance in the labour market, which affects both employers and employees. In the case of employers, this may lead to increasing costs because of the need to conduct training (education of staff with too low competencies), introduce organisational changes (combining duties), failure to introduce innovations, etc. In turn, mismatched employee competencies force some people to work outside their profession or perform work below their competencies.

The goal of this chapter is to juxtapose the data portraying the labour market from the perspective of the employer (demand side) and the employee (supply side). The chapter consists of five parts:

- In the first two, we discuss successively the structure of labour demand (companies' demand for employees) and the structure of labour supply (occupations in which people look for and find employment). In the third part we eventually recapitulate the discussion by means of a "balance sheet" which shows in a simplified form the extent of (mis)match between labour demand and supply.
- In the fourth part, covering an analysis of occupational mobility, we take a look at how economically active people have coped with the mismatch of occupational structure of supply and demand in the labour market.
- The fifth part, containing an analysis of competency requirements posed by the employers, provides knowledge of competency shortages that weaken the position of people competing for jobs offered in the market.

The first two parts present the structure of demand for candidates to work in individual occupations, which – juxtaposed with the occupational structure of the jobseekers – leads to the determination of occupational categories with relative shortage or oversupply of staff. The main limitation in an analysis of this kind is the internal differentiation of ISCO groups. Although the classification was designed to cluster occupations with similar scopes of duties and types of activities performed into individual categories, the variety present in the market cannot be easily forced into any rigid framework. Even if a given category has similar percentage shares in labour demand and supply, this does not necessarily prove that the demand and supply of this category are in perfect balance. However, the extent to which the two percentage shares coincide provides the upper limit of the goodness of fit. We present these balances convinced that even such an imperfect tool is capable of helping to pinpoint the potential problems in the labour market, which can later be made the subject of in-depth analyses.

In the fourth part, we analyse the occupational mobility of staff prospectively and retrospectively. The prospective approach answers the question about the further history of people changing their occupational status (especially finishing the work they have performed so far) while the retrospective approach answers the question about the early experience of individuals who found themselves in the specific situation after the change (especially: people who started working in a given profession). In fifth part, we supplement the data concerning the actual capacity (or incapacity) of employees to adjust to the requirements of the labour market with the data on competency requirements defined by employees seeking staff. We pay special attention to the identification of these competencies-related needs, in whose case the problem of shortage or mismatch is especially visible.

In all rounds of research conducted as part of the BKL, approximately every sixth employer advertised vacancies (in the autumn of 2010 – 16% employers, and in the spring of 2011 and 2012 – 17%).<sup>1</sup> The proportion of employers not currently recruiting but declaring that they would like to do so in the following half-year (counting from spring 2012) was similar (18%).

The factors that influence seeking of employees include first of all the level of development of the company, employment volume, and satisfaction from competencies of the current employees (Table I.1).<sup>2</sup> Employers from more strongly developing companies more frequently declared readiness to employ, with odds<sup>3</sup> being more than four times as high (exp B = 4.34 in 2011 and 4.56 in 2012)<sup>4</sup> as among stagnant companies. (Only in the autumn of 2010 the tendency was weaker, when the opportunity for employment in more strongly developing companies was more than twice as high: exp B = 2.54.) The impact of the volume of employment is quite obvious: the larger the firm, the greater the readiness to employ. The largest businesses, with over 500 employees, indicated three times as high odds of seeking employees as the smallest ones employing up to 10 people (exp B = 5.55 in 2010, 4.52 in 2011 and 4.69 in 2012, although it must be added that in the last two rounds this connection was statistically insignificant). Similarly, the assessment of employee competencies understandably influences the odds of making the decision to increase employment. The employers unsatisfied with competencies were twice as likely to hire as the satisfied ones (exp B = 3.57 in 2010, 3.14 in 2011, and 2.95 in 2012).

In turn, the impact of the sector on employability was not as obvious. It can be said that in each year analysed, these were the entrepreneurs from the construction and transport sectors who more often than the others declared greater employment needs.

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<sup>1</sup> Studies in the first round were conducted from 17th August to 10th December 2010, in the second – from 29th March to 29th June 2011, and in the third – from 22nd February to 31st May 2012.

<sup>2</sup> Used for the assessment of impact of various factors on the need to recruit staff was logistic regression with the answer to the question “Does your business currently seek people to work at any post?” as the dependent variable. The analysis concerned only businesses, and excluded institutions (central government and its establishments, local and regional authorities, mutual societies, organisational units of the state, organisational units of local and regional authorities, cooperatives, HE institutions, independent public healthcare facilities, and funds). The decision resulted from the fact that one of the predictors of probability whether the employer sought employees was the business development phase index, which concerns only businesses.

<sup>3</sup> The term “odds” refers to the ratio between the number of companies seeking employees per one company not seeking employees. Odds must be differentiated from probability (in fact, odds are the ratio of probability that the company of a given type is seeking employees to the probability that a company of the same type is not seeking any employees at the moment).

<sup>4</sup> Exp B stands for an exponentiated regression coefficient B (i.e. Euler’s number, e, raised to the power of B); its value informs us how a unit change in a given variable affects the odds that a company is seeking employees. For example, in this sentence, we learn that the odds of finding such a company among the developing ones are approximately 4.5 times higher than in the group of stagnant firms (controlled for all the remaining variables included in the analysis).

**Table I.1.**

Results of the model of logistic regression predicting whether a company is advertising vacancies

	Exp(B) variables	2010	2011	2012
	Constant	0.098***	0.104***	0.125***
<b>Development phase</b>	(Reference: Stagnant)	***	***	***
	Poorly developing	1.353***	1.805***	1.791***
	Developing	2.326***	2.579***	2.512***
	Strongly developing	2.537***	4.337***	4.556***
<b>Employment volume</b>	(Reference: 1–9)	***	***	**
	10–49	1.331**	1.086	1.211
	50–249	1.883***	1.822**	2.071*
	250–499	3.488***	3.731***	3.268**
	500+	5.555*	4.523	4.688
<b>Assessment of employee competences</b>	(Reference: Satisfied)	***	***	***
	Require supplementary training	1.749***	1.856***	1.981***
	Unsatisfied	3.567***	3.138***	2.947***
<b>Administrative region</b>	(Reference: Dolnośląskie)	***	***	***
	Kujawsko-pomorskie	1.244	0.860	0.601***
	Lubelskie	1.595**	1.079	0.700*
	Lubuskie	1.394*	1.108	0.876
	Łódzkie	1.336	1.675***	0.776*
	Małopolskie	1.809***	1.110	1.104
	Mazowieckie	1.748***	1.096	0.909
	Opolskie	1.662*	1.198	0.541**
	Podkarpackie	1.451*	0.928	0.866
	Podlaskie	1.918**	1.037	1.189
	Pomorskie	1.516**	1.588***	0.949
	Śląskie	1.457*	1.077	0.873
	Świętokrzyskie	0.825	1.212	0.777
	Warmińsko-mazurskie	1.222	1.350*	0.666*
	Wielkopolskie	1.065	1.187	0.840
Zachodniopomorskie	1.504*	1.453**	0.889	
<b>Main field of operation</b>	(Reference: Construction and transport)	***	***	***
	Manufacturing and mining	0.552***	0.675***	0.590***
	Trade, accommodation, and food service	0.738***	0.637***	0.801***
	Specialist services	1.385	0.387***	1.616*
	Private education	0.792*	0.494***	0.653***
	Human health and social work activities	0.707***	0.747***	0.810**
<b>Model summary</b>	Cox & Snell's R-squared	0.053	0.060	0.063
	Nagelkerke's R-squared	0.087	0.098	0.104
	McFadden's R-squared	0.058	0.065	0.069
	Likelihood ratio test significance	***	***	***
	N	9326	10474	10723

significance levels: \*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$ .

Source: BKL: Employer Study 2010–2012.

Discussing employer demand for labour, it seems right to analyse specific numbers of candidates to work in individual occupations, which the respondents were also asked about.<sup>5</sup> The data corroborate the picture of economic stagnation in the country. Although demand for labour increased in the successive years, and in the autumn of 2010 employers sought approximately 560,000, in the spring of 2011 – approximately 590,000, and in the spring of 2012 – approximately 610,000 people, these numbers reflect only the scale of vacancies to be filled, and say nothing about the parallel employment cuts. Significant here is the fact that despite the increase of the demand for workforce in the period in question, unemployment kept growing throughout the period: from 1.870,000 at the end of 2010 to 2,004,000 in the following two years. The data from 2011 and 2012 clearly show that, despite the eagerness to employ new people declared by the employers, an increasing number of Poles remain without employment, even during seasonal works.

The interest in the individual occupational categories from the first ISCO level is presented in Table I.2, in a breakdown into six generally defined sectoral groups.<sup>6</sup> The table contains estimates for the entire population (in thousands of jobs).

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<sup>5</sup> The population data presented need, however, to be treated as certain general indicators, and not precisely defined values. This results both from the declarative nature of the information acquired, and from the need of appropriate weighting of the data. Disproportionate sampling was used to include a substantial number of large firms in the sample, which necessarily led to severe variance of the weights. This in turn increases the confidence intervals while assessing population volumes.

<sup>6</sup> The Polish Classification of Activities (PKD) was simplified (with the use of the CHAID decision trees) for the needs of the studies, by clustering precisely defined sectors into six more general categories, with the category "Education" being subsequently broken into public and private.

**Balance between employment needs and the potential of the labour market**

**Table I.2.**

**Job groups (ISCO-1)<sup>7</sup> sought by employers (in thousands of jobs), broken down by the sector (data estimates for entire population)**

Year	Sector	Group of occupations (ISCO, level 1)								Total
		1 MANA	2 PROF	3 ASSO	4 CLER	5 SERV	7 CRAF	8 OPER	9 ELEM	
2012	Manufacturing and mining	1.4	7.0	6.3	0.8	2.5	44.4	10.9	4.9	78.2
	Construction and transport	2.1	8.0	7.0	4.1	2.2	115.9	40.1	13.4	192.8
	Trade, and accommodation and food services	1.1	13.2	15.7	7.9	65.3	28.6	19.1	14.6	165.6
	Specialist services	2.0	45.6	28.0	7.8	25.2	13.4	3.5	3.9	129.4
	Public education	0.0	3.5	0.1	0.1	0.1	0.0	0.0	0.1	4.0
	Private education	0.0	3.6	1.9	0.6	2.1	0.0	0.0	0.0	8.1
	Human health and social work activities	0.3	29.6	10.5	1.3	3.2	0.0	0.0	3.1	48.0
	Total	6.9	110.5	69.6	22.6	100.6	202.3	73.6	40.0	626.1
2011	Manufacturing and mining	0.6	5.6	4.3	6.4	4.2	44.2	11.2	5.4	81.9
	Construction and transport	3.5	20.1	10.6	1.9	4.0	100.6	36.6	18.9	196.2
	Trade, and accommodation and food services	2.2	7.2	21.0	9.0	61.8	37.4	16.8	10.8	166.1
	Specialist services	4.5	26.0	29.7	9.1	27.7	11.3	1.8	2.0	112.1
	Public education	0.0	4.2	0.2	0.1	0.3	0.1	0.0	1.0	5.9
	Private education	0.0	1.2	0.1	0.3	0.1	0.2	1.4	0.7	3.9
	Human health and social work activities	0.0	20.3	7.7	0.4	1.7	0.1	0.0	0.5	30.8
	Total	10.9	84.6	73.6	27.2	99.7	193.8	67.8	39.2	596.9
2010	Manufacturing and mining	2.2	4.9	7.3	3.9	3.2	39.4	13.6	5.7	80.3
	Construction and transport	2.5	7.4	7.5	4.8	3.3	70.5	37.7	5.2	138.9
	Trade, and accommodation and food services	2.7	20.0	29.0	17.0	45.4	19.3	9.1	10.0	152.6
	Specialist services	3.2	52.0	17.3	15.6	40.6	6.1	6.4	1.7	143.0
	Public education	0.0	2.6	0.3	0.2	0.1	0.1	0.0	0.2	3.5
	Private education	0.0	4.0	0.6	0.1	0.2	0.4	0.5	0.1	5.9
	Human health and social work activities	0.0	28.3	3.8	4.0	6.7	0.1	0.0	0.5	43.3
	Total	10.7	119.2	65.9	45.5	99.5	135.9	67.3	23.3	567.4

*The table excludes the category of hired agricultural workers (group 6) due to its small sample size.*

*Source: BKL: Employer Study 2010–2012.*

In 2012, much like in the previous years, these were the businesses and institutions operating in construction and transport, and personal (trade, accommodation and food services) and specialist services sectors that reported largest labour demand.

In 2011–2012, the structure of demand for labour was fairly stable. The categories in most frequent demand were skilled workers, with the demand coming especially from the construction sector (and to a much lower degree – manufacturing and mining). Coming second, with the demand oscillating around

100,000 jobs were categories of professionals and sales and personal service workers. Worth noting is also a major demand for assemblers and operators (in this chiefly drivers and mobile plant operators).

Somewhat more precisely defined data on job groups (ISCO level 2 classification) is presented in Table I.3.

**Table I.3.**

**Job groups (ISCO–2) sought by employers (in 1000s of jobs, estimated data for the whole population)**

Group of occupations (ISCO–2)	2010	2011	2012
71 Building and related trades workers, excluding electricians	62.8	101.3	105.6
83 Drivers and mobile plant operators	54.1	50.9	58.2
52 Sales workers	65.8	50.8	55.7
51 Personal service workers	25.5	40.1	39.2
72 Metal, machinery and related trades workers	30.3	43.6	38.4
23 Teaching professionals	37.6	22.7	35.1
33 Business and administration associate professionals	43.2	47.8	34.7
74 Electrical and electronic trades workers	13.2	17.8	29.0
75 Food processing, wood working, garment and other craft and related trades workers	28.3	29.5	27.5
24 Business and administration professionals	26.2	28.0	24.8
21 Science and engineering professionals	17.2	18.5	16.9
93 Labourers in mining, construction, manufacturing and transport	9.2	25.5	16.5
31 Science and engineering associate professionals	5.6	7.7	15.9
22 Health professionals	7.0	6.2	12.0
26 Legal, social and cultural professionals	11.4	2.9	11.7
25 Information and communications technology professionals	19.8	6.3	10.0
43 Numerical and material recording clerks	13.7	12.8	9.4
34 Legal, social, cultural and related associate professionals	3.1	7.3	8.7
81 Stationary plant and machine operators	7.4	11.2	8.7
91 Cleaners and helpers	5.1	5.6	8.6
41 General and keyboard clerks	19.7	9.2	8.1
42 Customer services clerks	9.8	3.6	3.5
12 Administrative and commercial managers	2.5	3.2	2.7
13 Production and specialised services managers	3.9	4.0	2.6
54 Protective services workers	7.6	5.8	2.6

*The table includes occupations sought by at least 50 employers in all the rounds of the study.*

Source: BKL: Employer Study 2010–2012.

Generally, in all the three rounds of the study, the largest employee demand was reported in the case of building and related trade workers (without electricians),<sup>8</sup> drivers and mobile plant operators, and sales workers. A shift in the demand for construction workers between 2010 and the later years should be assigned primarily to the seasonal fluctuations, as in 2010 the study was conducted in the autumn, and in 2011 and 2012 – in the spring.<sup>9</sup>

<sup>8</sup> The demand for electricians was also substantial, and was especially strongly visible in 2012.

<sup>9</sup> The difference in the number of candidates sought between 2010 and the later years is clearly visible in the construction and transport sector (see: Table I.2).

Individual professional categories do not rank very high, with the teaching professionals ranking relatively highest, yet when all the professional categories are considered jointly, the group comes second (after skilled workers) on the list of employees sought.

## 2. Labour supply: description of the employed and jobseekers

We know what employees were sought in 2010–2012. In this section, we answer the question concerning the supply of labour in the period in question, that is in which occupations Poles sought employment, and in which they found it. We will also try to answer the question in what way the success in seeking employment in individual occupations was related to such distinctive features as sex, age, and level of education. A definite answer to such questions would require panel data: knowing the individual's age, sex, and education, it would be possible to trace the specific jobseeker's history. We would know in what occupation the person sought employment in a given year, and their situation in the following: whether employment was found in the desired occupation or in another one, or maybe the person continues to seek employment, or withdrew from the labour market altogether. Without information at the individual level, we will try to answer indirectly the questions posed, by comparing the group of people who in 2010–2012, that is while participating in the study, were seeking employment in specific occupations (Seekers 2010+, for short) with the group of people who found employment in that profession in 2010–2012 and retained it until the time of the study (Workers 2010+, for short). Assuming that people take up jobs only in the occupational categories in which they seek employment, differences between the two groups concerning the relevant features would clearly attest to the influence of these features on the odds of finding employment in the given occupation.<sup>10</sup> As real life breaks this assumption to a greater or smaller degree, an analysis of this type cannot give equally credible results as one conducted on panel data,<sup>11</sup> for which reason the results presented here should be treated only as guidelines.

The analysis was conducted on the data aggregated from all the previous rounds of the population study (2010, 2011, 2012). To set the analysis in a broader context, besides the data for jobseekers, and people finding employment in 2010–2012, the tables present also the characteristics of the totality of the workers (Workers: Total) and groups of people who started the employment they declared in the study in 2010–2012, which was either their first full-time job or own business activity (Workers: 2010+(1)).

To sum up, the tables I.4A-F present the data for the following groups:

- Workers: Total** – all the people employed on job contracts, or conducting their (agricultural or non-agricultural) businesses at the moment of conducting the successive rounds of the study; in the case of people working both as employees and “on their own”, the work they started later was taken into account.
- Workers: 2010+** – a subset of the total number of workers; the group of people who relatively recently (in 2010 or later) started jobs they held at the time of the interview.
- Workers: 2010+(1)** – a subset of Workers 2010+; the group of people who relatively recently (in 2010 or later) started the jobs they held at the time of the interview, and who had neither been employed earlier by another employer nor had run their own business earlier (i.e. the job was the first regular<sup>12</sup> job in their life).

<sup>10</sup> Let us assume that there was a total of  $n$  people seeking employment in a certain occupation, of which number  $n_1$  found it; moreover, in the jobseeker group there were  $m$  members of a given group (e.g. women or people with higher education), of whom  $m_1$  people found employment in the occupation. In that case, the difference between the group's share in the jobseeking total ( $m/n$ ) and job-finding total ( $m_1/n_1$ ) clearly shows whether the probability of finding employment in the given occupation by the members of the group ( $m_1/m$ ) is greater, equal or smaller than average ( $n_1/n$ ). Particularly,  $m_1/n_1 = m/n$ , if and only if  $m_1/m = n_1/n$ .

<sup>11</sup> In a panel study, we would have at our disposal information concerning whether people found employment in the occupational categories in which they sought it (and if they did not find it in “their” occupations, whether they found it elsewhere, or remained altogether unemployed).

<sup>12</sup> For the sake of simplicity, here and in the further part of the chapter, “regular work” denotes work performed on the power of job contract or own business activity.

**Seekers 2010+**

– people who at the moment of conducting the individual rounds of the study declared that they were seeking employment (which is not tantamount to the group of the unemployed because in some cases seeking employment meant only a willingness to change the job performed so far); the analysis ignores the people who declared seeking “any employment”.

**Labour supply:  
description  
of the employed  
and jobseekers**

In the case of people employed on job contracts, the analysis was broken down into ISCO level 1 job groups: in the case of employees, this was the occupation performed at the time of the study, and in the case of jobseekers – the occupation in which the respondents declared to look for employment. Besides, those running their own business (independent of the occupation performed) and agricultural activity are distinguished as separate groups.

Let's explain how to read tables I.4A-F using the clerical support workers group as the example. Table I.4A shows that altogether 2174 people working in this category were examined in all the three rounds of the study, of whom 369 started such work in 2010–2012, and for 180 it was the first regular work. Table I.4B provides information about the participation of clerical support workers in the whole working population (7.6%), among those who began their current employment in 2010–2012 (8.6%), and among those who started their first regular work in 2010–2012 (10.8%). The Seekers 2010+ rows provide information that in 2010–2012, employment on the posts of clerical support workers was sought by 740 people, which accounted for 9.8% of all jobseekers.

Table I.4C shows that the average age of all clerical support workers (total, at the time of the study) was 38.6 years, and in the case of the group employed in 2010–2012, it was 30.4 (moreover, if that was their first regular work, the average age dropped to 26).

Table I.4D informs that women accounted for as many as 75.7% of jobseekers seeking clerical jobs in 2010–2012, and for “only” 60.2% of those who started such employment in that period and retained it to the time of the study.

Table I.4E contains the data that show among others that 92.3% of jobseekers seeking clerical jobs in 2010–2012 and 87.1% of those who started such employment in that period and retained it to the time of the study, had at least secondary education. Analogously, Table I.4F shows that 31.6% of jobseekers seeking clerical jobs in 2010–2012 had higher education, while 37.8% of those who started such employment in that period and retained it to the time of the study were HE graduates.

Having provided that explanation, let's move to a more precise analysis of the results.

**Table I.4A. Number of people in the sample (weighted data)**

		Workers			Seekers 2010+
		Total	2010+	2010+(1)	
JOB CONTRACTS	1 MANA	884	94	17	58
	2 PROF	3947	401	162	889
	3 ASSO	2913	373	173	864
	4 CLER	2174	369	180	740
	5 SERV	4057	848	353	1753
	7 CRAF	4285	681	287	1350
	8 OPER	2667	497	163	550
	9 ELEM	1897	445	170	1366
	non-agri ent.	3263	512	125	
agri ent.	2400	76	35		
Total		28487	4296	1665	7570

**Table I.4B. Percentage**

		Workers			Seekers 2010+
		Total	2010+	2010+(1)	
JOB CONTRACTS	1 MANA	3.1	2.2	1.0	0.8
	2 PROF	13.9	9.3	9.7	11.7
	3 ASSO	10.2	8.7	10.4	11.4
	4 CLER	7.6	8.6	10.8	9.8
	5 SERV	14.2	19.7	21.2	23.2
	7 CRAF	15.0	15.9	17.2	17.8
	8 OPER	9.4	11.6	9.8	7.3
	9 ELEM	6.7	10.4	10.2	18.0
	non-agri ent.	11.5	11.9	7.5	
agri ent.	8.4	1.8	2.1		
Total		100.0	100.0	100.0	100.0

**Table I.4C. Age (average)**

		Workers			Seekers 2010+
		Total	2010+	2010+(1)	
JOB CONTRACTS	1 MANA	41.7	36.5	28.6	34.4
	2 PROF	39.7	31.0	27.9	31.5
	3 ASSO	39.5	30.8	27.9	33.3
	4 CLER	38.6	30.4	26.0	32.1
	5 SERV	37.2	31.8	26.3	33.6
	7 CRAF	39.8	32.5	26.5	38.6
	8 OPER	39.5	33.0	26.6	37.5
	9 ELEM	42.2	37.6	31.2	41.0
	non-agri ent.	42.0	34.3	28.6	
agri ent.	44.2	31.8	25.1		
Total		40.1	32.8	27.3	35.7

**Table I.4D. Percentage of women**

		Workers			Seekers 2010+
		Total	2010+	2010+(1)	
JOB CONTRACTS	1 MANA	46.2	33.3	45.8	42.5
	2 PROF	68.1	61.1	66.4	64.4
	3 ASSO	54.1	48.6	51.0	51.7
	4 CLER	66.6	60.2	63.3	75.7
	5 SERV	67.9	70.0	71.7	81.1
	7 CRAF	15.9	13.1	12.8	15.4
	8 OPER	12.2	16.1	12.8	7.0
	9 ELEM	54.5	48.4	49.2	36.4
	non-agri ent.	33.0	38.0	33.9	
agri ent.	43.2	40.4	30.8		
Total		45.7	43.8	46.0	49.8

**Table I.4E. At least secondary education (in %)**

		Workers			Seekers 2010+
		Total	2010+	2010+(1)	
JOB CONTRACTS	1 MANA	97.5	97.1	100.0	100.0
	2 PROF	99.0	99.5	99.6	98.4
	3 ASSO	91.1	89.5	92.1	87.1
	4 CLER	88.1	87.1	87.5	92.3
	5 SERV	64.4	67.7	72.8	50.1
	7 CRAF	34.8	38.2	40.6	23.5
	8 OPER	42.3	55.9	57.8	38.5
	9 ELEM	29.1	37.9	39.9	17.7
	non-agri ent.	74.9	76.5	74.4	
agri ent.	34.1	63.4	86.1		
Total		64.5	66.7	69.3	53.1

**Table I.4F. Higher education (in %)**

		Workers			Seekers 2010+
		Total	2010+	2010+(1)	
JOB CONTRACTS	1 MANA	68.9	71.6	49.0	69.0
	2 PROF	81.9	86.1	82.7	76.3
	3 ASSO	33.4	39.9	43.0	25.5
	4 CLER	30.8	37.8	42.4	31.6
	5 SERV	11.0	11.3	11.2	4.4
	7 CRAF	3.0	4.5	4.9	1.5
	8 OPER	2.8	2.9	1.9	2.9
	9 ELEM	1.6	3.5	3.3	1.4
	non-agri ent.	30.0	34.0	30.3	
agri ent.	4.6	7.3	12.0		
Total		25.5	24.1	23.9	17.2

White type denotes results based on counts smaller than 100.

Source: BKL – Population Study 2010–2012.

Altogether, approximately every fifth working person ran their own business: 8.4% ran a farm, and another 11.5% – non-agricultural businesses. Among the employees, most numerous were the categories of skilled workers (15.0%), service and sales workers (14.2%), and professionals (13.9%). In the comparison of the total number of working people with those who entered their current employment after 2009 (2010+ category), two matters are worth attention:

- in the case of service and sales workers (group 5) and elementary occupations (group 9), their participation is greater among those relatively recently employed (2010–2012)
- in the group of professionals (group 2), and farmers (agriculture businesses) the opposite is found: their share among the unemployed in the past three years is visibly smaller.

A number of reasons for such a status quo can be mentioned. At least partially responsible for the proportion of fresh employment in trade and personal services is the relative increase of significance of the sector in the whole economy.<sup>13</sup> Another factor that impacts also elementary labour can be churn in employment, greater than is present in the case of professionals and farmers. Another factor is the age (Table I.4C). Farmers are the oldest job group, and it is natural that many of them began their activity much earlier than the others. In turn, in trade and services, a greater churn can additionally coincide with the motivation of the employers to employ younger people, also those only entering the market.<sup>14</sup> Such a motivation is most clearly missing in the case of elementary occupations workers being the oldest group of occupations, when considering people employed in 2010–2012. In their case, the average age is 37.6, and is even insignificantly higher than in the group of managers (36.5), who in most cases need plenty of professional experience to be given managerial posts.

Table I.4C provides more interesting results concerning the impact of age on employability. We may start with the reasonable fact that people who found employment in 2010–2012, were on average much younger than the total of the working population (by more than 7 years), especially if this was the first work in their life (by nearly 13 years younger). Such age differences were present not only at the general level but also in each job group analysed. The comparison of two columns in Table I.4C, containing the data on the age of people who sought employment in 2010–2012 (last column) and those who found employment<sup>15</sup> at the time (third column from the right) leads to less obvious conclusions. Generally, the average jobseeker age was 35.7 and the average job-finder age – 32.8, i.e. the latter were three years younger.<sup>16</sup> Present here, however, are significant differences between the individual job groups

- managers are the only group where job finders were older (on average by approximately 2 years) than jobseekers<sup>17</sup>
- the age factor was immaterial among the professionals: the difference between jobseekers and job finders was only half a year, to the advantage of the young
- the largest disproportions were present in skilled worker categories, with job finders being on average six years younger, and among the operators, in whose case job finders were 4.5 years younger on average
- in the remaining job groups, job finders were approximately 2 years younger than jobseekers.

Generally, the results presented above suggest that while competing for employment, especially in the case of skilled workers and operators (drivers included), the relatively younger people gain certain advantage. The only exception from this rule are managers and professionals. In the group of professionals, age does not seem to play an important role, and in the group of managers even somewhat older people (from whom a greater maturity and life experience can be expected) are preferred.<sup>18</sup>

<sup>13</sup> According to BAEL, the participation of service and sales workers in the total number of the employed grew from 8.8% to 14.1% in 1994–2012.

<sup>14</sup> Employers seeking sales and personal service workers set the upper limit of the desired age at 41, that is three years below the average for all the employers (see: Table III.3 in Chapter Three).

<sup>15</sup> For a large proportion of the respondents in 2011, and for even more in 2012, we can say that they not only found employment but also retained it, as at the time of the study they had been in employment for over a year (which means that they could have started the work they mentioned in 2012 two years earlier, i.e. in 2010).

<sup>16</sup> The average of 32.8 years includes also the people who “found” work by starting their own business. The calculated average that does not account for the self-employed, but only job holders is, nevertheless, very similar, and amounts to 32.6 years.

<sup>17</sup> Worth adding here is that more than every other jobseeker looking for employment on a managerial position sought employment while still performing their previous work, therefore in majority of cases, these people were not unemployed. The average age for the unemployed was lower by nearly 4 years than the jobseeker total in this job group, and amounted to 30.8 years. This additionally emphasises the advantage of more mature age in the case of people seeking employment on managerial positions.

<sup>18</sup> For a more extensive discussion of the age-related questions, turn to Chapter Three.

## Balance between employment needs and the potential of the labour market

An analogous analysis of data contained in Table I.4D shows that finding a job is somewhat more difficult for women than for men. Women accounted for a half of the total number of jobseekers in 2010–2012, yet only for 43.8% of those who found employment.<sup>19</sup> The largest negative differences were encountered in managerial, clerical support workers, and service and sales workers groups. Generally, the more difficult position of women is linked to the fact that more or less every other woman seeks for a job in clerical support and services and sales groups, which feature a relative oversupply of candidates (see: Table I.6C).<sup>20</sup> The exceptions worth noting, with the share of women among job finders visibly higher than their share among jobseekers, are the groups of elementary occupations and plant and machine operators (including drivers). The positive results for women in the operators group are significant also because this group of jobs generally features the lowest participation of women.

It is also interesting to compare the share of women among all the employed in the individual job groups with their share among the employed in 2010–2012 (columns: Total and 2010+). At the level of the totals, the percentage of women among all the employed and in the subgroup of those who started their current work recently (i.e. after 2009) is similar (45.7% and 43.8%). Visible here, however, are substantial differences at the level of individual job groups. The percentage of women among the recently employed is lower than among the total in the managerial, professional, technician and other associate professional, clerical support, and elementary worker groups. These differences may be caused by a variety of factors, yet moving to the fore is the fact that in the job groups listed above women far less often decide to change their employer. We can draw such conclusions indirectly on the grounds of the average employment time with the current employer, which in these groups is visibly longer in the case of women (see: Chart I.1 in section 4. Employee occupational mobility).

The last result that may attract attention in Table I.4D is an increased participation of women among the people who started their own business relatively recently (after 2009). As far as women account for 33% of all the entrepreneurs, their proportion reaches 38% among the businesses set up in the last three years.<sup>21</sup>

The link between the economic activity and the level of education is presented in the last two tables in the set, containing data on the percentage of people with at least secondary (I.4E) and higher (I.4F) education. In the case of at least secondary education, the comparison of jobseekers in 2010–2012 with those who found their employment at that time (column: 2010+) leads to the conclusion that (at least) secondary education is an advantage in professions from the lower half of ISCO classification (beginning with services, down to elementary occupations). In the services sector, leavers of secondary schools awarding certificates (Polish: *matura*) and HE graduates account for half of jobseekers, yet also for as many as two thirds of those who found employment. A similarly powerful “overrepresentation” is present in the job groups lying below.<sup>22</sup>

Education among people running their business in agriculture reveals a specific pattern. Far more often than farmers perceived as a total, the people who started such activity in 2010–2012 have at least secondary (34.1% → 63.4%) and even higher (4.6% → 7.3%) education. When we focus on the people for whom the recently started activity in agriculture is the first work experience in their lives, we see even higher levels of education (at least secondary education: 86.1%; higher: 12.0%).<sup>23</sup> Obviously, this is partially related to the fact that “beginner” farmers come predominantly from the younger, better educated generation – yet the same can be said about all the remaining occupational categories where, however, we do not witness such radical changes in the level of education.

<sup>19</sup> The proportion of women in the group of people who found jobs (i.e. excluding those who started their own business) was insignificantly higher: 44.7%.

<sup>20</sup> One should remind here that each high-level group of occupations in ISCO classification (here: of the first, most general level) consists of a number of groups of lower order. As we show in other reports from the BKL Study, women and men belonging to a single more general group, as a rule work and seek employment in different subgroups. For example, according to the data for 2010 and taking into account the current or last employment, women accounted for 68% in the higher professionals group, yet in the health professionals subgroup, they represented as many as 85%, and in the information and communications technology professionals subgroup – only 12% [Czarnik et al., 2011, pp. 21–23].

<sup>21</sup> The difference in the proportion of women between “old” (i.e. established before 2010) and “new” (i.e. established in 2010–2012) companies, is significant at the level of  $p < 0.01$ .

<sup>22</sup> At one of the conferences presenting results from the BKL 2011 round, a representative of a large transport company admitted that they prefer secondary to vocational education in the drivers they employ, to maintain an appropriate level of personal culture.

<sup>23</sup> One must, however, note that the data for the farmers starting activity in 2010–2012 are gathered from relatively small counts (altogether 76, of whom fewer than every other found it the first regular employment).

Higher education gives a clear employability advantage in the groups from the upper part of the ISCO classification: professionals, technicians and other associate professionals, and clerical support workers, but also in the service and sales workers group, and among skilled workers. In the last two groups, the proportion of people who completed higher education in 2010–2012 was even from 2.5 to 3 times as high as in the group of jobseekers (nevertheless, higher education graduates are a small minority of people seeking this type of jobs). Comparing the “recently employed” (column: 2010+) with the total number of employed (Total), we see an especially large increase of participation of people with higher education among associate professionals and technicians (33.4% → 39.9%), and among the clerical support workers (30.8% → 37.8%). The result is even more telling, as the global percentage of higher education graduates among the employed in 2010–2012 amounts to 24.1%, and is even somewhat lower than in the total (25.5%). This corroborates the fact that these are the two professional groups that capture the “surplus” of people with higher education [see: Górnjak (ed.), 2012, pp. 127–131].

## Employees no longer available: working age retired and pensioners

### 2.1. Employees no longer available: working age retired and pensioners

To supplement the analysis of the current state of employment and labour supply, we present data on people still at working age (as only such were covered by the BKL Study), who are already retired or receive old age pension and are no longer economically active. Table I.5 presents the occupational structure of this group as total and also in breakdown into subgroups of those who ended regular employment before 1998, in 1988–2002, in 2003–2007, and in 2008–2012.<sup>24</sup>

**Table I.5.**

**Working age retired and pensioners\* – occupational structure (in %)**

		Year of finishing work (job or own business)				Retired / pensioners – total	Currently working	Index of occupation's share within	
		before 1998	1998–2002	2003–2007	2008–2012			the retired/ pensioners total	the retired/ pensioners 2008–2012
		(A)	(B)	(C)	(D)			(E)	(F)
JOB HOLDERS	1 MANA	0.8	1.0	2.9	2.5	1.8	3.1	0.59	0.81
	2 PROF	3.9	2.8	7.9	8.1	5.8	13.9	0.42	0.58
	3 ASSO	6.2	9.0	8.6	9.2	8.2	10.2	0.80	0.90
	4 CLER	6.0	7.2	5.3	5.1	5.9	7.6	0.77	0.67
	5 SERV	10.1	8.9	10.6	12.3	10.5	14.2	0.74	0.87
	7 CRAF	32.5	30.0	23.0	23.6	27.2	15.0	1.81	1.57
	8 OPER	18.5	18.2	14.8	15.1	16.6	9.4	1.77	1.61
	9 ELEM	12.6	11.1	9.7	9.7	10.7	6.7	1.61	1.45
non-agri ent.		3.7	5.8	5.1	4.6	4.8	11.5	0.42	0.40
agri ent.		5.7	6.1	12.0	9.7	8.5	8.4	1.01	1.16
Total	%	100.0	100.0	100.0	100.0	100.0	100.0		
	N	1440	1250	1536	1387	5613	28487		

\* Women under 59, men under 64.

Source: BKL – Population Study 2010–2012.

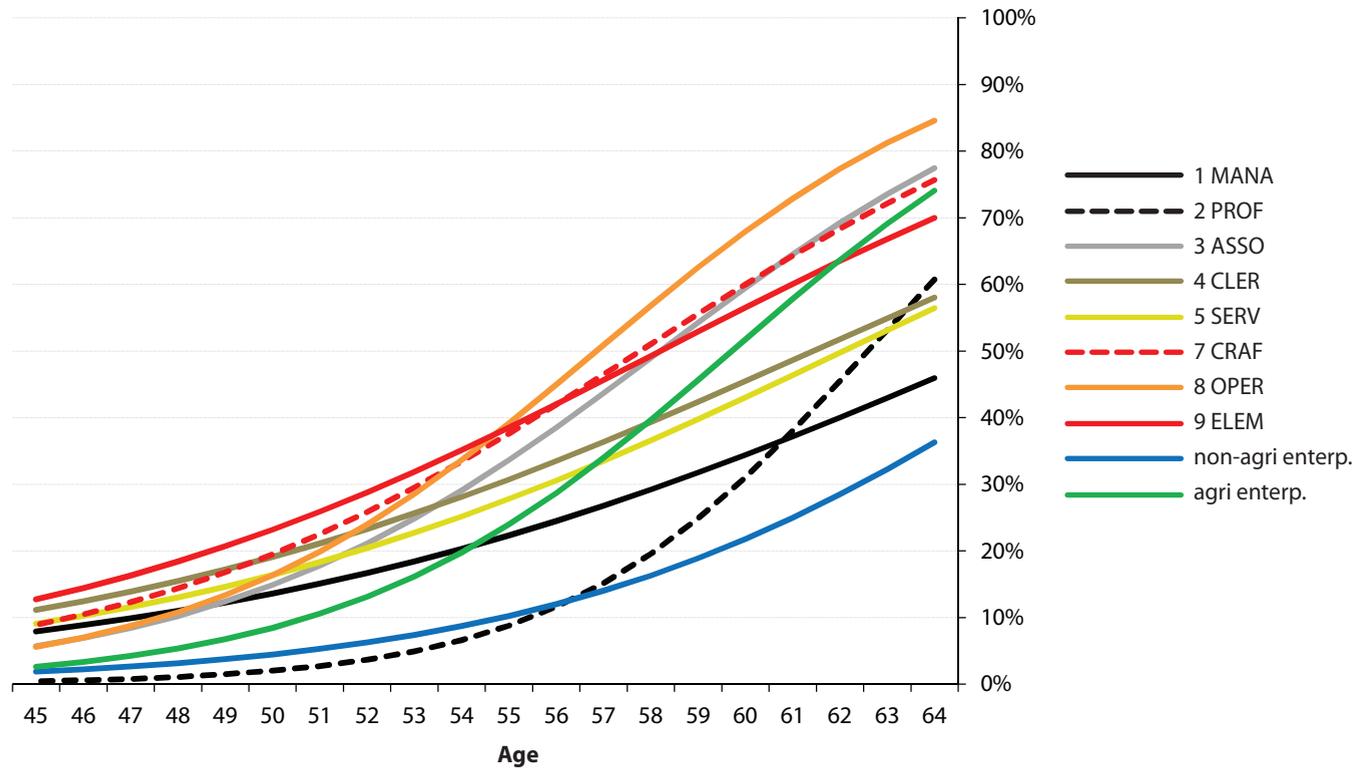
<sup>24</sup> The periods are defined in this way so as to ensure relatively equal counts for each period. It is worth noting that a systemic change introducing bridging pensions and limiting early retirement options was introduced in 2009. Due to the relatively low counts of the retired/pensioners finishing work in individual years, it was, however, difficult to assess the link between this change with the occupational structure on the grounds of our data.

## **Balance between employment needs and the potential of the labour market**

The most important conclusions result from the comparison of the columns (E) and (F), containing respectively data on the occupational structure of the retired/pensioners (concerning their last employment) and the occupational structure of those currently working. The relationship between these two values is presented in the column Index of occupation's share within the retired/pensioners total (E)/(F). The value of the index is 1, when the probability of finding a representative of the given occupation in the group of the retired/pensioners is the same as the probability of finding such a representative in the group of the working population (white cell background), when the probability is higher among the retired, the index value is higher than 1 (red background), and when it is lower – below 1 (blue background). The only group with the value of the index close to 1 are people running their own business in agriculture (1.01), who account for 8.4% of the employed and 8.5% of the retired. The indices in the three lowest categories of hired employees (skilled and unskilled workers, and operators) exceed 1.6. In other words, the probability of finding representatives of these occupational categories among the retired/pensioners is more than one and a half times as high as among the working population. Professionals and people conducting business outside agriculture (0.42) occupy positions by the opposite end of the spectrum – these are the job groups that on average move later into retirement and/or pensions. Ranking third are people in managerial jobs (0.59). Generally, we obtain similar results when examining the “recent” retired/pensioners, i.e. the ones who finished working in 2008 or later (column F) – the indices for this group are found in the last column of the table (Index of occupation's share within the retired/pensioners 2008–2012). To corroborate these results, logistic regression was used in Charts I.1A and I.1B to show the proportions of the retired/pension holders, depending on age in individual job groups. Both in the case of men and women, we see that professionals and people running their own businesses belong to the categories that move out of the labour market latest. In turn, the economic activity of operators and skilled workers (and also elementary workers among men) ends earliest.

**Chart I.1A.**

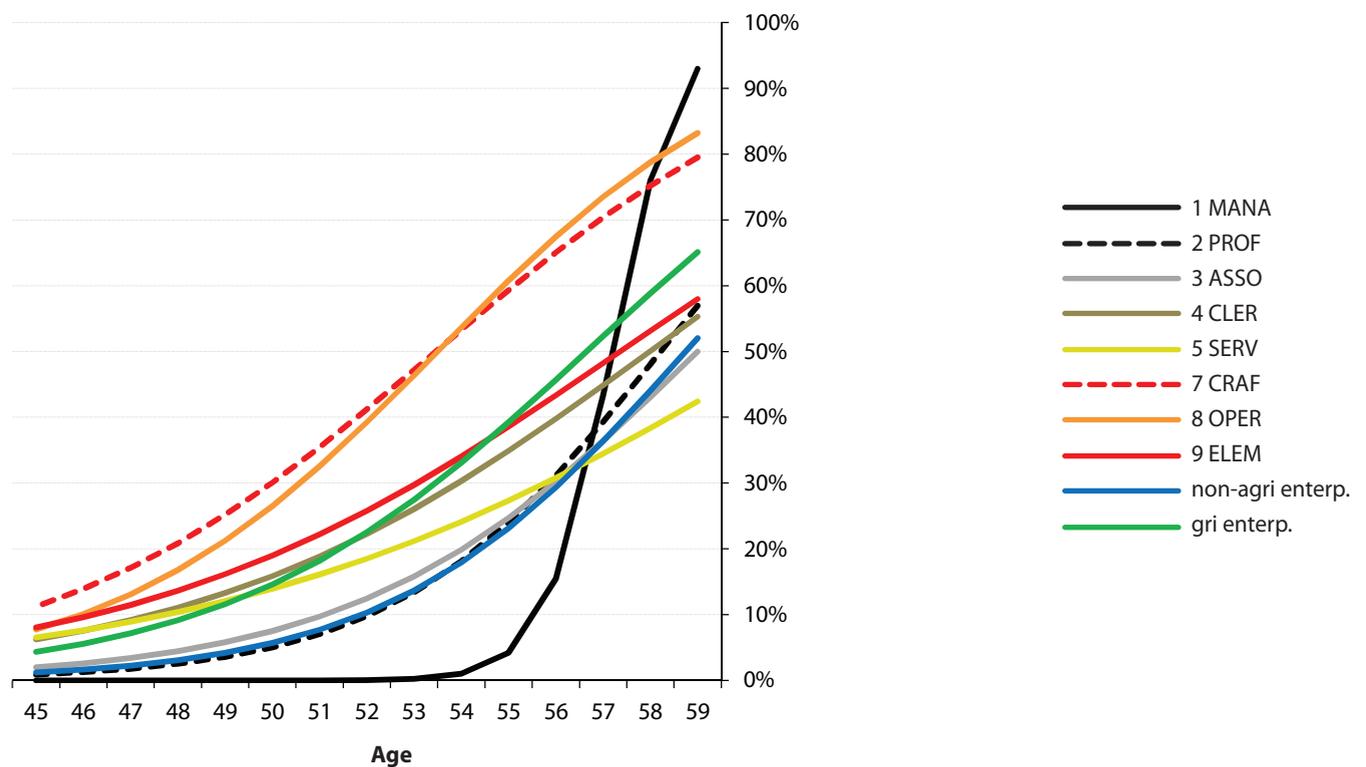
**Proportions of nonworking retired/pensioners, broken down by age and job group (men)**



Source: BKL – Population Study 2012.

**Chart I.1B.**

**Proportions of nonworking retired/pensioners, broken down by age and job group (women)**



Source: BKL – Population Study 2012.

### 3. Employee supply and demand balance

Following the previous rounds of the study, in this section we present a balance comparing the occupational structure of the labour supply and demand, accounting for geographic criteria.<sup>25</sup> The data for the individual administrative regions (voivodeships) are presented at ISCO level 1 (8 major job groups), while comparisons based on ISCO level 2 are presented for super-regions to maintain meaningful sample sizes.

**Table I.6A.**

**Supply structure: ISCO–1 level occupations offered by candidates to employment in 2012**

Administrative region	2 PROF	3 ASSO	3 CLER	5 SERV	7 CRAF	8 OPER	9 ELEM	Total
Dolnośląskie	8.0	7.9	7.5	24.0	26.6	4.8	21.2	100.0
Kujawsko-pomorskie	1.7	9.5	5.4	34.0	27.7	11.6	10.0	100.0
Lubelskie	11.3	9.0	10.9	23.7	20.3	13.8	11.0	100.0
Lubuskie	10.1	13.0	11.2	23.9	25.7	4.4	11.7	100.0
Łódzkie	7.8	10.6	9.9	28.6	17.2	9.8	16.1	100.0
Małopolskie	15.4	10.9	8.0	24.7	16.8	8.6	15.1	100.0
Mazowieckie	10.9	12.9	11.4	23.4	20.5	6.6	14.2	100.0
Opolskie	13.0	10.2	12.0	25.4	23.0	6.7	9.7	100.0
Podkarpackie	10.5	8.5	7.1	23.4	30.1	7.1	13.3	100.0
Podlaskie	11.1	10.2	12.0	29.8	11.6	9.4	15.4	100.0
Pomorskie	10.3	6.0	4.3	28.6	15.7	15.6	19.4	100.0
Śląskie	8.9	13.6	7.9	38.6	14.2	3.0	13.7	100.0
Świętokrzyskie	11.6	7.6	8.0	24.9	26.8	1.4	19.8	100.0
Warmińsko-mazurskie	11.6	10.5	4.8	29.0	16.0	5.4	22.8	100.0
Wielkopolskie	13.3	14.6	10.6	35.3	10.8	6.7	8.5	100.0
Zachodniopomorskie	8.5	17.1	8.3	21.8	16.9	8.9	17.8	100.0
Total	10.5	11.1	8.6	27.9	19.4	7.5	14.9	100.0

*Due to the low counts, managerial (1 MANA) and agricultural (6 AGRI) occupations were excluded.*

*Currently working respondents and the ones who declared that they seek "any employment" were omitted.*

*Source: BKL – Population Study 2012.*

Among the occupations on offer, the ones related to service and sales come to the fore in every administrative region; moreover, skilled workers make their presence strongly visible in most administrative regions.

<sup>25</sup> Such listings are of approximate type. In absolute numbers, the estimated number of candidates sought by employers is a few times smaller than that of jobseekers.

**Table I.6B.****Demand structure: ISCO-1 level occupations sought by employers in 2012**

<b>Administrative region</b>	<b>2 PROF</b>	<b>3 ASSO</b>	<b>3 CLER</b>	<b>5 SERV</b>	<b>7 CRAF</b>	<b>8 OPER</b>	<b>9 ELEM</b>	<b>Total</b>
Dolnośląskie	15.1	18.9	4.5	15.5	24.7	13.9	7.5	100.0
Kujawsko-pomorskie	6.6	24.4	5.9	7.5	33.0	15.1	7.4	100.0
Lubelskie	14.2	11.0	6.7	11.2	27.7	16.3	13.0	100.0
Lubuskie	10.6	18.3	1.9	18.1	35.3	15.0	0.9	100.0
Łódzkie	17.1	4.6	1.6	10.5	42.4	15.3	8.5	100.0
Małopolskie	14.3	9.8	2.8	28.4	24.5	13.9	6.4	100.0
Mazowieckie	31.0	8.9	6.3	17.7	27.5	4.6	4.1	100.0
Opolskie	7.7	12.7	0.6	15.2	43.9	15.9	4.0	100.0
Podkarpackie	15.2	10.3	2.3	13.7	36.4	11.8	10.4	100.0
Podlaskie	10.4	6.6	2.1	10.6	46.5	15.4	8.5	100.0
Pomorskie	23.1	7.4	5.1	19.7	31.5	9.3	4.0	100.0
Śląskie	16.8	12.6	3.2	20.1	30.1	10.8	6.4	100.0
Świętokrzyskie	8.6	8.2	1.2	14.1	54.2	10.0	3.8	100.0
Warmińsko-mazurskie	10.7	8.1	4.4	11.4	44.4	12.4	8.7	100.0
Wielkopolskie	18.5	9.9	0.4	10.2	37.6	17.6	5.8	100.0
Zachodniopomorskie	9.4	16.8	3.8	9.9	39.4	11.9	8.8	100.0
<b>Total</b>	<b>17.8</b>	<b>11.2</b>	<b>3.6</b>	<b>16.2</b>	<b>32.7</b>	<b>11.9</b>	<b>6.5</b>	<b>100.0</b>

*Due to the low counts, managerial (1 MANA) and agricultural (6 AGRI) occupations were excluded.*

*Source: BKL – Population Study 2012.*

Skilled workers were the most desired job group in all administrative regions. Clerical support workers and elementary workers enjoyed the relatively lowest employer interest.

**Balance between employment needs and the potential of the labour market**

**Table I.6C.**

**Differences between occupations supply and demand (ISCO-1) in 2012 (in percentage points)**

<b>Administrative region</b>	<b>2 PROF</b>	<b>3 ASSO</b>	<b>3 CLER</b>	<b>5 SERV</b>	<b>7 CRAF</b>	<b>8 OPER</b>	<b>9 ELEM</b>
Dolnośląskie	-7.1	-11.1	3.0	8.5	2.0	-9.1	13.7
Kujawsko-pomorskie	-5.0	-14.9	-0.5	26.5	-5.3	-3.4	2.6
Lubelskie	-2.9	-1.9	4.2	12.5	-7.5	-2.5	-2.1
Lubuskie	-0.5	-5.3	9.4	5.8	-9.6	-10.6	10.8
Łódzkie	-9.3	6.0	8.3	18.1	-25.2	-5.5	7.6
Małopolskie	1.1	1.1	5.2	-3.7	-7.7	-5.3	8.8
Mazowieckie	-20.0	4.1	5.1	5.7	-6.9	2.1	10.1
Opolskie	5.3	-2.5	11.4	10.3	-20.9	-9.2	5.7
Podkarpackie	-4.7	-1.8	4.8	9.8	-6.4	-4.6	2.9
Podlaskie	0.7	3.7	9.9	19.2	-34.9	-6.0	6.9
Pomorskie	-12.8	-1.3	-0.8	8.9	-15.9	6.4	15.5
Śląskie	-7.8	1.0	4.7	18.5	-15.8	-7.8	7.3
Świętokrzyskie	3.0	-0.6	6.8	10.9	-27.3	-8.7	15.9
Warmińsko-mazurskie	0.8	2.4	0.4	17.6	-28.4	-7.0	14.1
Wielkopolskie	-5.1	4.8	10.2	25.2	-26.8	-10.9	2.7
Zachodniopomorskie	-0.9	0.3	4.5	11.9	-22.5	-3.1	9.0
<b>Total</b>	<b>-7.4</b>	<b>-0.2</b>	<b>5.0</b>	<b>11.7</b>	<b>-13.3</b>	<b>-4.4</b>	<b>8.5</b>

*Due to the low counts, managerial (1 MANA) and agricultural (6 AGRI) occupations were excluded.*

*Source: BKL – Population Study 2012.*

Much like in the previous years, moving to the fore is the shortage of skilled workers, and – although at a smaller scale – of operators and professionals: these categories can be said to be in demand. From the perspective of the jobseeker, sales, and personal care worker jobs offer relatively worst prospects.

The successive tables, I.7A-C, contain more detailed data (at ISCO level 2) for individual supra-regions of Poland.

Table I.7A.

Employee supply  
and demand balance

Supply structure: ISCO level 2 occupations offered by candidates to employment in 2012

ISCO-1	ISCO-2	Central	Southern	Eastern	North-Western	South-Western	Northern	Total
2 PROF	21 Science and engineering professionals	2.4	2.4	1.6	1.0	1.9	1.0	1.8
	22 Health professionals	0.6	1.2	1.3	0.7	1.5	0.4	0.9
	23 Teaching professionals	1.7	3.7	3.3	3.3	1.1	2.7	2.8
	24 Business and administration professionals	2.1	2.2	2.2	2.0	0.5	2.7	2.1
	25 Information and communications technology professionals	0.8	0.7	0.5	1.6	0.0	0.5	0.7
	26 Legal, social and cultural professionals	2.4	1.8	2.1	2.8	4.2	0.7	2.1
3 ASSO	31 Science and engineering associate professionals	1.1	2.1	1.8	2.1	1.3	2.0	1.8
	32 Health associate professionals	1.2	0.9	1.5	1.1	2.8	0.6	1.2
	33 Business and administration associate professionals	5.5	6.5	2.8	6.8	1.7	3.1	4.6
	34 Legal, social, cultural and related associate professionals	3.7	2.3	1.9	3.6	2.3	1.2	2.5
	35 Information and communication technicians	0.8	0.6	0.8	1.5	0.3	1.8	1.0
4 CLER	41 General and keyboard clerks	6.1	6.3	7.2	9.5	5.7	3.4	6.4
	42 Customer services clerks	1.1	0.3	1.2	0.3	0.3	0.3	0.6
	43 Numerical and material recording clerks	3.0	1.4	0.7	0.4	1.7	1.1	1.4
	44 Other clerical support workers	0.8	0.0	0.1	0.0	1.0	0.0	0.3
5 SERV	51 Personal service workers	2.9	9.9	6.5	7.7	8.9	8.9	7.3
	52 Sales workers	18.5	18.7	15.2	19.2	12.5	18.3	17.4
	53 Personal care workers	2.2	1.0	2.1	1.3	1.0	1.9	1.6
	54 Protective services workers	1.5	2.7	1.3	0.9	2.4	1.3	1.7
7 CRAF	71 Building and related trade workers, excluding electricians	5.5	4.7	6.0	4.2	8.1	5.8	5.5
	72 Metal, machinery and related trades workers	3.8	6.3	8.5	5.0	7.7	7.0	6.4
	73 Handicraft and printing workers	0.6	0.0	0.2	0.2	0.6	0.0	0.2
	74 Electrical and electronic trades workers	1.8	1.7	1.8	1.9	1.7	0.9	1.6
	75 Food processing, wood working, garment and other craft and related trades workers	8.0	2.8	6.7	4.6	8.3	5.9	5.8
8 OPER	81 Stationary plant and machine operators	0.3	0.3	0.5	0.3	0.0	0.0	0.3
	82 Assemblers	0.0	0.5	0.1	0.2	0.0	0.9	0.3
	83 Drivers and mobile plant operators	7.3	4.8	7.6	6.5	5.3	9.9	6.9
9 ELEM	91 Cleaners and helpers	3.0	3.9	3.6	3.3	3.2	4.6	3.6
	93 Labourers in mining, construction, manufacturing and transport	10.8	9.3	9.3	7.3	12.8	10.4	9.7
	94 Food preparation assistants	0.0	0.6	0.7	1.0	1.4	1.3	0.7
	96 Refuse workers and other elementary workers	0.6	0.6	0.7	0.0	0.0	1.3	0.6
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0

Due to the low counts, managerial (1 MANA) and agricultural (6 AGRI) occupations were excluded.

Currently working respondents and the ones who declared that they seek "any employment" were omitted.

Administrative regions (voivodeships) in the supra-regions: Central (Mazowieckie, Łódzkie), Southern (Małopolskie, Śląskie), Eastern (Lubelskie, Podkarpackie, Podlaskie, Świętokrzyskie), North-Western (Lubuskie, Wielkopolskie, Zachodniopomorskie) South-Western (Dolnośląskie, Opolskie), and Northern (Kujawsko-Pomorskie, Pomorskie, Warmińsko-Mazurskie).

Source: BKL – Population Study 2012.

At the national scale, 17.4% of jobseekers declared eagerness to be employed as sales workers while 7.3% indicated the sector of personal services.

**Balance between  
employment needs  
and the potential of  
the labour market**

**Table I.7B.**

**Demand structure: ISCO-2 level occupations sought by employers in 2012**

ISCO-1	ISCO-2	Central	Southern	Eastern	North-Western	South-Western	Northern	Total
2 PROF	21 Science and engineering professionals	3.1	2.2	3.8	2.0	4.4	1.6	2.8
	22 Health professionals	13.3	3.6	2.7	6.4	0.4	1.6	5.8
	23 Teaching professionals	1.8	2.3	1.5	2.8	0.9	1.8	2.0
	24 Business and administration professionals	5.9	4.9	2.0	1.6	4.7	4.2	4.1
	25 Information and communications technology professionals	0.8	2.6	1.4	0.8	1.8	2.9	1.6
	26 Legal, social and cultural professionals	3.3	0.3	1.2	1.9	1.7	3.4	1.9
3 ASSO	31 Science and engineering associate professionals	2.5	2.0	3.7	1.9	3.7	2.7	2.6
	32 Health associate professionals	1.0	0.8	0.4	2.6	0.1	4.1	1.4
	33 Business and administration associate professionals	2.9	7.7	4.0	5.8	11.3	4.7	5.7
	34 Legal, social, cultural and related associate professionals	1.5	0.7	1.0	2.5	1.6	1.6	1.4
	35 Information and communication technicians	0.1	0.3	0.2	0.2	1.4	0.0	0.3
4 CLER	41 General and keyboard clerks	1.5	1.0	1.6	0.4	3.4	0.9	1.3
	42 Customer services clerks	0.5	0.8	0.5	0.8	0.3	0.4	0.6
	43 Numerical and material recording clerks	3.3	1.1	0.9	0.2	0.1	2.8	1.5
	44 Other clerical support workers	0.0	0.2	0.3	0.1	0.0	1.2	0.3
5 SERV	51 Personal service workers	5.5	10.5	4.0	3.5	7.7	6.5	6.4
	52 Sales workers	9.2	13.5	8.0	7.0	6.2	7.3	9.1
	53 Personal care workers	1.5	0.0	0.0	0.0	1.3	0.1	0.5
	54 Protective services workers	0.2	0.6	0.4	0.7	0.3	0.3	0.4
7 CRAF	71 Building and related trade workers, excluding electricians	19.3	14.5	20.1	15.7	14.8	20.1	17.3
	72 Metal, machinery and related trades workers	4.5	4.8	9.0	6.2	9.4	7.5	6.3
	73 Handicraft and printing workers	0.1	0.0	0.9	0.5	0.1	0.1	0.3
	74 Electrical and electronic trades workers	5.1	6.6	3.1	5.5	1.9	3.7	4.8
	75 Food processing, wood working, garment and other craft and related trades workers	2.6	2.1	6.8	10.8	1.7	3.7	4.5
8 OPER	81 Stationary plant and machine operators	2.3	1.5	1.8	0.6	1.6	0.3	1.4
	82 Assemblers	0.7	0.1	1.3	0.9	0.1	0.8	0.6
	83 Drivers and mobile plant operators	4.2	10.0	10.3	13.6	12.4	10.8	9.6
9 ELEM	91 Cleaners and helpers	2.0	0.3	0.1	1.5	4.7	0.9	1.4
	93 Labourers in mining, construction, manufacturing and transport	1.1	2.0	8.9	1.9	0.7	2.9	2.7
	94 Food preparation assistants	0.0	2.9	0.2	0.6	0.7	0.0	0.9
	96 Refuse workers and other elementary workers	0.1	0.0	0.0	1.1	0.9	0.9	0.4
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Due to the low counts, managerial (1 MANA) and agricultural (6 AGRI) occupations were excluded.*

*Administrative regions (voivodeships) in the supra-regions: Central (Mazowieckie, Łódzkie), Southern (Małopolskie, Śląskie), Eastern (Lubelskie, Podkarpackie, Podlaskie, Świętokrzyskie), North-Western (Lubuskie, Wielkopolskie, Zachodniopomorskie) South-Western (Dolnośląskie, Opolskie), and Northern (Kujawsko-Pomorskie, Pomorskie, Warmińsko-Mazurskie).*

*Source: BKL – Population Study 2012.*

Table I.7C.

Employee supply  
and demand balance

Differences between demand and supply of occupations (ISCO-2) in 2012 (in percentage points)

ISCO-1	ISCO-2	Central	Southern	Eastern	North-Western	South-Western	Northern	Total
2 PROF	21 Science and engineering professionals	-0.7	0.2	-2.2	-0.9	-2.5	-0.6	-1.0
	22 Health professionals	-12.8	-2.4	-1.4	-5.7	1.1	-1.2	-4.8
	23 Teaching professionals	-0.2	1.4	1.8	0.5	0.2	0.9	0.9
	24 Business and administration professionals	-3.8	-2.8	0.2	0.4	-4.3	-1.6	-2.0
	25 Information and communications technology professionals	0.0	-1.9	-0.8	0.8	-1.8	-2.3	-0.9
	26 Legal, social and cultural professionals	-0.9	1.5	0.9	0.9	2.5	-2.7	0.2
3 ASSO	31 Science and engineering associate professionals	-1.4	0.1	-1.9	0.2	-2.4	-0.7	-0.8
	32 Health associate professionals	0.1	0.0	1.1	-1.4	2.7	-3.5	-0.2
	33 Business and administration associate professionals	2.5	-1.2	-1.2	1.0	-9.5	-1.6	-1.1
	34 Legal, social, cultural and related associate professionals	2.2	1.6	0.9	1.1	0.7	-0.4	1.1
	35 Information and communication technicians	0.8	0.3	0.7	1.3	-1.0	1.8	0.7
4 CLER	41 General and keyboard clerks	4.6	5.3	5.6	9.1	2.2	2.5	5.1
	42 Customer services clerks	0.6	-0.5	0.7	-0.5	0.0	-0.1	0.1
	43 Numerical and material recording clerks	-0.3	0.3	-0.1	0.1	1.5	-1.7	-0.2
	44 Other clerical support workers	0.8	-0.2	-0.2	-0.1	0.9	-1.2	0.0
5 SERV	51 Personal service workers	-2.6	-0.6	2.5	4.2	1.2	2.4	0.9
	52 Sales workers	9.3	5.2	7.1	12.2	6.3	11.0	8.3
	53 Personal care workers	0.7	0.9	2.1	1.3	-0.4	1.8	1.1
	54 Protective services workers	1.3	2.1	1.0	0.2	2.1	1.0	1.2
7 CRAF	71 Building and related trade workers, excluding electricians	-13.8	-9.8	-14.1	-11.5	-6.7	-14.4	-11.8
	72 Metal, machinery and related trades workers	-0.7	1.6	-0.5	-1.2	-1.7	-0.5	0.1
	73 Handicraft and printing workers	0.4	0.0	-0.7	-0.4	0.5	-0.1	-0.1
	74 Electrical and electronic trades workers	-3.3	-4.9	-1.3	-3.6	-0.2	-2.8	-3.1
	75 Food processing, wood working, garment and other craft and related trades workers	5.3	0.6	-0.2	-6.1	6.6	2.2	1.2
8 OPER	81 Stationary plant and machine operators	-2.0	-1.2	-1.2	-0.3	-1.6	-0.3	-1.1
	82 Assemblers	-0.7	0.5	-1.2	-0.8	-0.1	0.1	-0.3
	83 Drivers and mobile plant operators	3.1	-5.2	-2.6	-7.1	-7.1	-0.8	-2.6
9 ELEM	91 Cleaners and helpers	1.0	3.6	3.5	1.8	-1.5	3.7	2.2
	93 Labourers in mining, construction, manufacturing and transport	9.7	7.3	0.5	5.4	12.2	7.5	7.0
	94 Food preparation assistants	0.0	-2.3	0.4	0.5	0.7	1.3	-0.1
	96 Refuse workers and other elementary workers	0.6	0.6	0.6	-1.1	-0.9	0.4	0.2

Due to the low counts, managerial (1 MANA) and agricultural (6 AGRI) occupations were excluded.

Administrative regions (voivodeships) in the supra-regions: Central (Mazowieckie, Łódzkie), Southern (Małopolskie, Śląskie), Eastern (Lubelskie, Podkarpackie, Podlaskie, Świętokrzyskie), North-Western (Lubuskie, Wielkopolskie, Zachodniopomorskie) South-Western (Dolnośląskie, Opolskie), and Northern (Kujawsko-Pomorskie, Pomorskie, Warmińsko-Mazurskie).

Source: BKL – Population Study 2012.

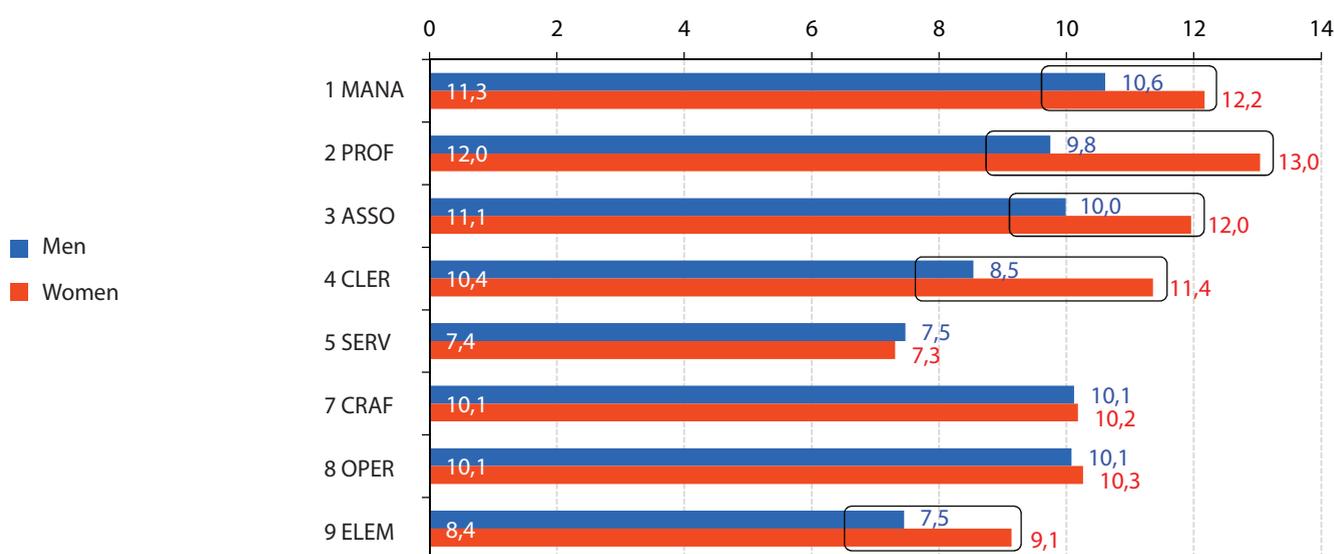
In all the regions, with the exception of the South-Western, the largest shortages of employees are present in the job group most frequently sought by the employers, that is among construction workers. The three categories with the visible advantage on the side of supply are sales workers (52), labourers in mining, construction, manufacturing and transport (93), and also general and keyboard clerks (41).

## 4. Employee occupational mobility

Due to the incompatibility of the structure of job supply and demand, the question of occupational mobility of labour resources acquires major significance. In this section, we devote our attention to two aspects of mobility. First, we take a look at the average time of employment with the current employer, which allows indirect conclusions about the frequency of job changes<sup>26</sup> (categories where employment churn is higher should on average correspond to shorter times spent in employment at a given place). Secondly we examine mobility channels from the qualitative aspect, i.e. check between which job groups people changing employers move.

**Chart I.2.**

**Average time of employment with the current employee, broken down by sex**



Source: BKL – Population Study 2010–2012.

Characteristic of the service and sales workers is the shortest period of working at the current place of employment (7.4 years) with the situation of elementary workers being similar (8.4 years) – see: Chart I.2. The period of service in the remaining groups exceeds 10 years, and is longest among professionals (12 years). This result is worth emphasising, as professionals are the job group with the largest proportion of people with higher education (80%), who for purely arithmetical reasons, as the process of education lasts a few years longer, have the smallest potential for long-time service with a single employer. Thus, the long period of employment, longer than in the other groups, must be explained by a smaller churn combined with the relatively long period of economic activity (see: charts I.1A and I.1B).

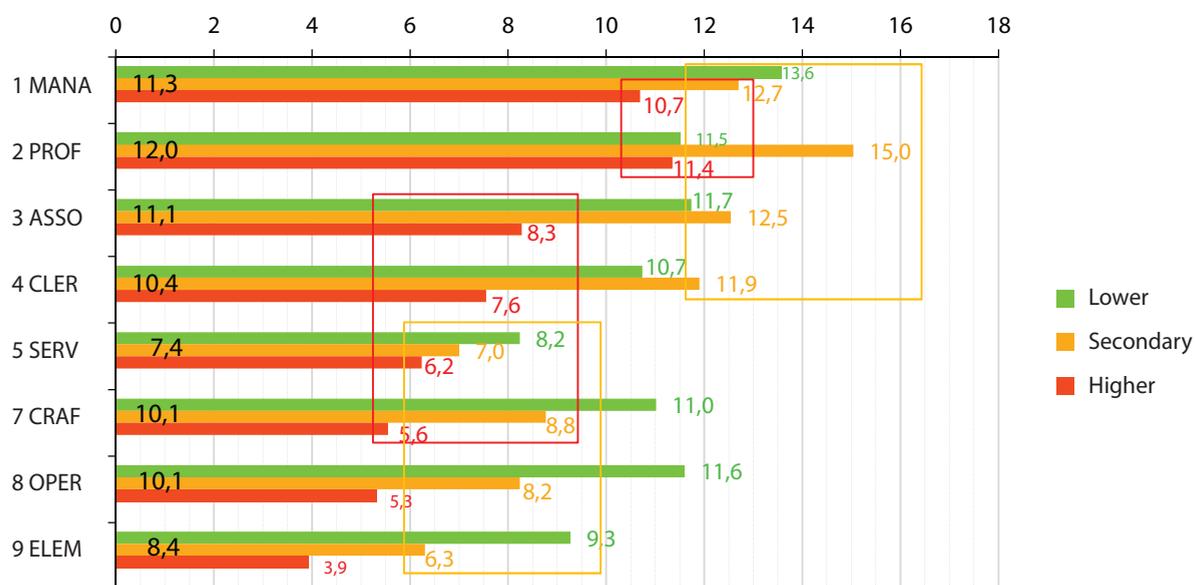
In most ISCO level 1 groups, we discover a significant difference between women and men: with the duration of work for the current employer being higher among women than among men by anything from 1.5 to 3 years on average. The exception are service workers, operators, and skilled workers, in whose case, the average time in current employment is similar for both sexes.

The average time of employment by current employer is very close for all levels of education, and amounts respectively to 10.3 years for education lower than secondary (conventionally: lower), 9.9 for secondary, and 9.8 for higher. Yet the illusion of equality disappears when examining people working in individual job groups (Chart I.3).

**Chart I.3.**

**Average time of employment with the current employer, broken down by the level of education**

**Employee occupational mobility**



The lighter bars refer to categories with counts below 100 (managers and professionals with lower education, and operators and elementary workers with higher).

Source: BKL – Population Study 2010–2012.

In most cases, inside individual occupational categories, people with higher level of education have shorter experience on the job, which is obviously related to the fact that their extended processes of education postponed their entry to the labour market. Moreover, it is visible that in the case of people with secondary education, the professions fall into two groups: the ones where time of employment is on average lower and does not exceed nine years (from services downwards) and the ones where it is visibly higher – 12 years and above (clerical support and higher groups). The case is similar among HE graduates, where we observe average longest employment time in the two highest categories: managers and professionals. This suggests that in the case of some of the better educated people, work in the categories from the bottom section of the ISCO hierarchy may be treated as temporary, and is performed while waiting for an opportunity for “an upward movement”.

One of the indicators of the “potential” occupational mobility is the percentage of the employed keen on changing their job. In all the years of the study, the percentage of people employed on job contracts trying to change their current jobs amounted approximately to 7%, with characteristic differences between the individual job groups (and also people at various levels of education) being present (Table I.8). The breakdown by sex was not accounted for in the table, as there are no systematic differences between men and women in this aspect.

**Balance between employment needs and the potential of the labour market**

**Table I.8.**  
Jobseekers among the currently employed on the power of job contract (in %)

Occupation	2010				2011				2012				Total			
	Lower	Secondary	Higher	Total												
1 MANA	0.0	5.0	4.5	4.5	0.0	1.6	6.8	5.4	0.0	1.4	7.2	5.4	0.0	3.0	6.1	5.1
2 PROF	0.0	3.6	6.4	5.8	9.7	6.5	6.7	6.7	6.6	3.6	7.3	6.7	6.7	4.7	6.8	6.5
3 ASSO	1.1	4.3	9.9	5.4	3.1	2.6	8.3	4.9	4.6	4.8	6.0	5.2	2.6	4.0	7.9	5.2
4 CLER	9.6	9.5	11.0	9.9	9.0	6.4	10.2	8.0	2.9	5.1	10.0	6.6	7.1	7.1	10.3	8.1
5 SERV	6.4	7.3	17.8	8.0	7.2	9.4	13.6	9.1	5.0	9.1	20.4	8.8	6.2	8.5	17.2	8.6
7 CRAF	5.0	9.6	25.4	7.0	6.0	7.8	24.6	7.1	3.2	5.3	17.1	4.4	4.7	7.5	21.8	6.1
8 OPER	5.4	11.0	12.1	7.6	5.7	7.6	10.8	6.6	4.0	8.2	41.4	6.7	5.0	8.9	20.6	7.0
9 ELEM	9.3	17.3	39.7	11.7	9.9	15.6	20.0	11.6	7.8	11.1	33.9	9.3	9.0	14.6	32.0	10.9
Total	6.1	8.0	8.6	7.5	6.8	7.2	8.3	7.4	4.5	6.6	9.1	6.6	5.8	7.3	8.6	7.1
1 MANA	10	107	219	337	7	75	225	307	7	72	179	259	24	254	624	902
2 PROF	10	222	997	1229	21	261	1201	1483	10	201	1136	1347	41	683	3334	4059
3 ASSO	114	597	241	952	89	510	390	989	64	588	352	1004	267	1695	984	2945
4 CLER	87	457	182	725	87	408	240	734	87	387	255	729	261	1252	677	2189
5 SERV	500	814	137	1450	446	665	160	1271	504	697	151	1352	1450	2175	448	4073
7 CRAF	891	443	37	1371	957	451	44	1452	973	479	53	1505	2821	1373	134	4328
8 OPER	558	335	26	919	483	302	27	811	516	424	23	963	1557	1061	75	2693
9 ELEM	500	173	9	682	421	166	8	595	433	185	13	631	1354	524	31	1909
Total	2668	3148	1848	7664	2511	2836	2295	7642	2596	3032	2163	7791	7775	9016	6306	23098

The lighter colour of the font denotes cells with counts below 100.

Generally, the total counts for all the years are insignificantly higher than in Table I.4A because they also include all the job holders who at the same time run their own businesses.

Source: BKL – Population Study 2010–2012.

It is worthwhile to pay attention to a number of regularities in Table I.8. First of all, in every year of the study, three job groups move to the fore in terms of the proportion of people eager to change jobs: elementary workers, service workers, and clerical support workers. In the case of the first two categories, the comment made earlier about the relatively high employment churn holds. Secondly, in every round of the study at the general level (the bottom line Total) we see that – with the level of education growing – also the readiness (eagerness) to change jobs is on the rise. Most active in this aspect were higher education graduates, who declared seeking a new job most often in practically every job group in every round of the study.<sup>27</sup> This is especially visible in the categories from the lower half of the ISCO hierarchy: working here are relatively few people with higher education, and a large proportion of them are interested in changing their jobs. Thirdly, the cells with lowest counts denote a particular “optimum”<sup>28</sup> of the job group from the point of view of people at a specific level of education. In the case of people with vocational or lower education, these are operators (in this, mostly drivers) and skilled workers, and in the case of people with secondary education – drivers, professionals, and technicians and other associate professionals.

<sup>27</sup> Two exceptions from this general rule were managers in 2010 and professionals in 2011.

<sup>28</sup> In this case “optimum” does not necessarily mean that these categories are the most popular at the given level of education, but rather that – once people with a given level of education have found such jobs – they are least likely to seek other employment.

## 4.1. Change of occupational situation

In this section we present two types of transitions in the labour market:

1. Transitions between different states of economic activity
  - analyses taking into account both the working population – employed (currently and/or previously) on the power of job contract or running their own business – and also the unemployed, being retired/holding pensions, and inactive for other reasons.
2. Transitions between various job groups, on the power of job contracts
  - analyses accounting only for job holders who have changed the employer.

We will conduct both types of the analyses in two aspects:

- **The prospective approach.** It accounts for where the people, who previously belonged to a specific category of economic activity, moved to. (This answers the following questions: What has happened to the people who previously ran their own business – Do they now work as hired professionals? Or are they perhaps unemployed? Have they moved into retirement?)
- **The retrospective approach.** It accounts for where the people who are currently in a specific category of economic activity came from. (This answers the following questions: What did the people currently working e.g. in trade and services do before? Were they hired to perform some other occupation? Did they own farms? Were they inactive?)

### 4.1.1. Transitions between states of economic activity

Let's begin by taking a closer look at the changes accounting for business activity, and also entering and leaving the labour market (tables I.9A and I.9B).<sup>29</sup>

It must be noted that the table accounts for the last recorded change in the economic activity of the respondents. The time when the change occurred cannot be clearly defined in all cases. We may, for example, know that in 1997 somebody left the job of a skilled worker, and since then took no other job nor ran own business (could, however, work on the power of a civil contract, or without one), and is currently retired. Such a person is accounted for in the table as one who moved from the "skilled worker" category to the R/OAP (Polish: *emerytura/renta*) i.e. retirement/pension category.

Interpreting the data in tables I.9A and I.9B, we must bear in mind that patterns of transitions in the labour market obviously depend on age. In the retrospective approach, the older the person, the greater probability of transition into retirement or old age pension; and in the retrospect – the younger the age, the greater the probability that the previous state was lack of economic activity.

<sup>29</sup> The analysis accounts solely for the working (currently or previously) on the power of job contract or running own business (agricultural or non-agricultural), and also the unemployed, the inactive, and the retired/holders of old age benefit. Excluded were approximately 8% of cases, that is people who were employed only on other grounds and did not run their own businesses. In the case of people holding jobs (i.e. employed) and running their own business at the same time, the "current situation" corresponds to the form of work that they started latest, and the "previous situation" – to the one that finished later.

**Tables I.9AB.**

**Prospective and retrospective transitions of people at working age in the labour market**

**A. PROSPECTIVE APPROACH**

Previous situation		Current situation (in %)						Total	
		Job	N-AGR	AGR	U	I	R/OAP	%	N
Paid employment	1 MANA	46.7	20.3	1.9	4.1	4.9	22.1	100.0	467
	2 PROF	55.6	14.8	1.7	5.6	6.5	15.7	100.0	2066
	3 ASSO	45.8	11.6	2.7	10.1	9.4	20.4	100.0	2262
	4 CLER	46.7	6.1	2.6	13.2	14.0	17.4	100.0	1903
	5 SERV	40.5	6.9	3.3	16.7	19.1	13.5	100.0	4395
	7 CRAF	37.8	7.4	4.2	14.8	11.7	24.0	100.0	6352
	8 OPER	36.3	5.6	4.2	12.8	8.5	32.5	100.0	2872
	9 ELEM	30.4	3.6	3.3	21.2	19.2	22.2	100.0	2717
	<b>N-AGR</b>	non-agri ent.	47.9	9.1	3.9	12.5	12.7	13.9	100.0
<b>AGR</b>	agricultural	12.8	1.6	2.3	4.7	9.6	68.9	100.0	695
<b>U</b>	unemployed								
<b>I</b>	inactive	52.7	5.3	6.4	6.9	25.6	3.0	100.0	23374
<b>E/R</b>	retired/ pensioner								
<b>Total</b>		46.3	6.6	4.8	10.4	19.0	12.9	100.0	49029

**B. RETROSPECTIVE APPROACH**

Current situation		Previous situation (in %)				Total	
		Job	N-AGR	AGR	I	%	N
Paid employment	1 MANA	44.0	8.0	0.2	47.8	100.0	873
	2 PROF	33.6	4.4	0.2	61.8	100.0	3926
	3 ASSO	39.5	4.9	0.4	55.3	100.0	2897
	4 CLER	38.9	3.7	0.1	57.2	100.0	2161
	5 SERV	42.0	3.7	0.4	53.9	100.0	4037
	7 CRAF	43.2	3.8	0.5	52.5	100.0	4264
	8 OPER	44.4	3.7	0.4	51.4	100.0	2647
	9 ELEM	50.1	2.6	0.8	46.5	100.0	1874
	<b>N-AGR</b>	non-agri ent.	56.0	5.4	0.3	38.2	100.0
<b>AGR</b>	agricultural	32.7	3.2	0.7	63.4	100.0	2370
<b>U</b>	unemployed	63.3	4.7	0.6	31.4	100.0	5114
<b>N</b>	inactive	32.2	2.6	0.7	64.5	100.0	9292
<b>E/R</b>	retired/ pensioner	77.0	4.2	7.6	11.2	100.0	6332
<b>Total</b>		47.0	3.9	1.4	47.7	100.0	49029

Source: BKL – Population Study 2010–2012.

The phenomenon most visible in the prospective approach is the transfer of people previously working in their own farm to retirement (68.9%).<sup>30</sup> To compare: only 13.9% of people who finished their (non-agricultural) businesses, moved to retirement or pension, and nearly every other (47.9%) went into paid employment. In the case of people who previously worked in paid employment, a number of characteristic results was observed:

- there is an apparent difference between the first four and the last four job groups as far as the degree of continuation in paid employment is concerned: former managers, professionals, technicians and other associate professionals, and clerical support workers have a markedly higher rate of continuation (ranging from 45.8% to 55.6%); with the lowest level at the opposite extremity (30.4%) being occupied by elementary workers, for whom change of labour market situation fairly often means going into unemployment or exit from the labour market
- a significant proportion of managers, professionals, and associate professionals left paid employment to start their own non-agricultural businesses (N-AGR) – in the case of managers, this group accounted for as much as 20.3%
- as far as the scale of undesirable transfers into unemployment (U) is concerned, the managers (as low as 4.1%) and professionals (5.6%) are in the best position, while the rates are worst for elementary workers (21.2%) and service and sales workers (16.7%)
- the case with leaving the labour market and becoming inactive (I) is similar: only 4.9% of managers and 6.5% of professionals abandoned economic activity, while in the case of services and elementary labour the respective proportion reaches 20%
- among people who did not declare any already finished paid employment or own business, i.e. among those who have not yet started such work or began it and continue holding their first job ("Previous situation: I – inactive"), every other person is in paid employment, and every fourth remains inactive.

<sup>30</sup> This result does not mean that farmers are more likely to go into retirement/pension. It merely reflects the fact that against other categories, farmers very often continue in their occupation until transition into retirement/pension; in other words, they relatively rarely happen to abandon their own farm for the sake of working in another profession.

In the retrospective approach, our attention is on the past activity of people currently in a particular profession. The main observations can be thus summarised:

- for very many people (45%–60%), their current paid employment (or own business) is the first work of the type in the lives: they did not work earlier for another employer, nor did they run their own business (category: “Previous situation: I –inactive”)
- it is interesting to compare agricultural and non-agricultural businesses, with most of the farmers (63.4%) being previously inactive (i.e. their farm is their first work), and only every third of them (32.7%) was earlier in paid employment; in the case of non-agricultural enterprises, the situation is clearly reversed: majority of today’s entrepreneurs boast experience gained in paid employment (56.0%: the highest proportion among all the job groups), and it is the first work for only 38.2% (the lowest proportion among all job groups)
- of the hired worker group, the one with the highest percentage of people still working at their first place of employment are professionals (61.8%)
- a significant share of managers (at least 8.0%) has had experience in running their own (non-agricultural) business
- in the case of the unemployed, 63.3% previously had paid employment, while 31.4% are people who have not yet been in paid employment nor run their own enterprises (I – inactive); among the people currently inactive, only every third has had experience of paid employment
- every ninth (11.2%) of today’s retired/pensioners (let’s reiterate: at working age) did not declare any paid employment and/or own business in the past; these people could obviously work in another form, e.g. on the power of civil and legal contracts; it cannot be excluded either that some of them simply failed to mention the fact of running an enterprise or having paid employment in the past in the questionnaire.

#### 4.1.2. Transitions between job groups

In this part, we focus on hired staff currently employed on job contracts (wage earners), who had earlier been in employment with another employer (an experience of 41% of current job holders). Observing whether, while changing employers, they change their previous job or rather move to another (and if so, which?) group, we can identify the actual channels of occupational mobility. The analysis accounts for people who changed their place of work in 2000–2012.<sup>31</sup>

As could be expected, both in the prospective and in the retrospective approach, relatively most frequent are the cases of continuing occupation, i.e. starting the type of job you performed previously for a new employer. It is also fairly noticeable that transitions between categories are governed by fairly foreseeable rules: shifts most often occur between categories situated relatively close in the ISCO hierarchy. Changing the job group, managers in most cases decided to work as professionals, and professionals – as managers or technicians and other associate professionals; skilled workers become operators, and operators – skilled workers.

Shown in tables I.10A–C, the continuation of occupation varies for different jobs. To analyse the phenomenon better, the key values were copied from the individual tables and put together in Table I.11. Columns (1), (2), and (3) contain counts transferred from Table I.10A, from the bottommost “Total” row, from the rightmost “Total” column, and from the diagonal, respectively. Columns (4) and (5) contain data from the bottommost “Total” row of table I.10C and the rightmost “Total” column of table I.10B, respectively. Columns (7) and (8) contain percentage values transferred from diagonals of tables I.10B and I.10C, respectively.

<sup>31</sup> After the exclusion of the low-count group of people who either previously were or currently are in paid employment in agricultural jobs; all the rounds of the study included 6863 people who changed their employers in 2000–2012.

**Tables I.10ABC.**

Transfers between job groups in 2000–2012 in the case of wage earners

**A. COUNTS**

		Previous occupation								
		1 MANA	2 PROF	3 ASSO	3 CLER	5 SERV	7 CRAF	8 OPER	9 ELEM	Total
Current occupation	1 MANA	83	85	51	29	35	12	5	3	303
	2 PROF	41	595	122	103	91	32	14	18	1016
	3 ASSO	24	71	281	103	156	110	38	28	811
	4 CLER	20	59	59	195	124	60	43	27	587
	5 SERV	12	45	72	109	726	149	56	131	1300
	7 CRAF	3	12	53	42	93	881	110	115	1309
	8 OPER	6	9	33	41	77	215	419	80	880
	9 ELEM	0	4	23	26	123	181	63	237	657
	Total	189	880	694	648	1425	1640	748	639	6863

**B. PROSPECTIVE APPROACH**

		Previous occupation								
		1 MANA	2 PROF	3 ASSO	3 CLER	5 SERV	7 CRAF	8 OPER	9 ELEM	Total
Current occupation	1 MANA	43.9	9.7	7.3	4.5	2.5	0.7	0.7	0.5	4.4
	2 PROF	21.7	67.6	17.6	15.9	6.4	2.0	1.9	2.8	14.8
	3 ASSO	12.7	8.1	40.5	15.9	10.9	6.7	5.1	4.4	11.8
	4 CLER	10.6	6.7	8.5	30.1	8.7	3.7	5.7	4.2	8.6
	5 SERV	6.3	5.1	10.4	16.8	50.9	9.1	7.5	20.5	18.9
	7 CRAF	1.6	1.4	7.6	6.5	6.5	53.7	14.7	18.0	19.1
	8 OPER	3.2	1.0	4.8	6.3	5.4	13.1	56.0	12.5	12.8
	9 ELEM	0.0	0.5	3.3	4.0	8.6	11.0	8.4	37.1	9.6
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

**C. RETROSPECTIVE APPROACH**

		Previous occupation								
		1 MANA	2 PROF	3 ASSO	3 CLER	5 SERV	7 CRAF	8 OPER	9 ELEM	Total
Current occupation	1 MANA	27.4	28.1	16.8	9.6	11.6	4.0	1.7	1.0	100.0
	2 PROF	4.0	58.6	12.0	10.1	9.0	3.1	1.4	1.8	100.0
	3 ASSO	3.0	8.8	34.6	12.7	19.2	13.6	4.7	3.5	100.0
	4 CLER	3.4	10.1	10.1	33.2	21.1	10.2	7.3	4.6	100.0
	5 SERV	0.9	3.5	5.5	8.4	55.8	11.5	4.3	10.1	100.0
	7 CRAF	0.2	0.9	4.0	3.2	7.1	67.3	8.4	8.8	100.0
	8 OPER	0.7	1.0	3.8	4.7	8.8	24.4	47.6	9.1	100.0
	9 ELEM	0.0	0.6	3.5	4.0	18.7	27.5	9.6	36.1	100.0
	Total	2.8	12.8	10.1	9.4	20.8	23.9	10.9	9.3	100.0

Source: BKL – Population Study 2010–2012.

**Table I.11.****Statistics summarising transfers between occupations in 2000–2012 (ISCO–1)****Change  
of occupational  
situation**

	No. of people working in the profession			% in the profession		Relative change of the share (in %) [(2)–(1)]/(1)	Continuation rate	
	was	is	continues*	was (1)/Σ1	is (2)/Σ2		prosp. (3)/(1)	retrosp. (3)/(2)
ISCO–1	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1 MANA	189	303	83	2.8	4.4	60.3	43.9	27.4
2 PROF	880	1016	595	12.8	14.8	15.5	67.6	58.6
3 ASSO	694	811	281	10.1	11.8	16.9	40.5	34.6
4 CLER	648	587	195	9.4	8.6	–9.4	30.1	33.2
5 SERV	1425	1300	726	20.8	18.9	–8.8	50.9	55.8
7 CRAF	1640	1309	881	23.9	19.1	–20.2	53.7	67.3
8 OPER	748	880	419	10.9	12.8	17.6	56.0	47.6
9 ELEM	639	657	237	9.3	9.6	2.8	37.1	36.1
<b>Total</b>	<b>Σ1= 6863</b>	<b>Σ2= 6863</b>	<b>3417</b>	<b>100.0</b>	<b>100.0</b>		<b>49.8</b>	<b>49.8</b>

\* This is the intersection of the “was” and “is”, i.e. the number of people who in the current and previous places of employment hold a job that belongs to the same job group.

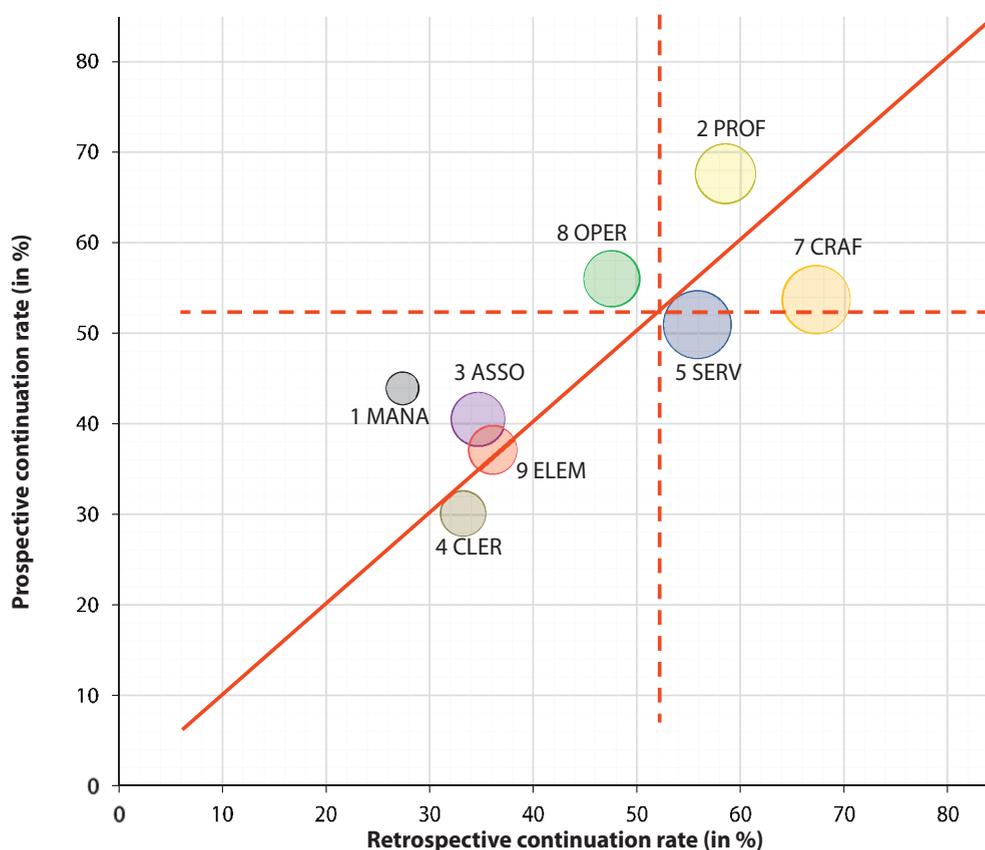
Source: BKL – Population Study 2010–2012.

The column (6) “Relative change of the share” compares the number of current holders of a given job with the number of people holding this job previously, and the difference is expressed in terms of a percentage change; it must be remembered that this accounts only for people in paid employment who changed their employer. Evidently, three occupations from the top of ISCO hierarchy move to the fore here, especially the managers, and so do the operators (in this mostly drivers). It can be said that in the occupational “transfers market”, these categories are more often chosen than abandoned. Standing at the opposite extreme is the category of skilled workers, which – after the change of jobs – contains 20% fewer people than before the change. This can be explained by the fairly poor inflow of staff from other occupational categories: skilled workers have the highest rate of retrospective continuation (67.3%), which means that of each three people who came to work in this category after changing jobs, no fewer than two performed a similar job for the previous employer. Clerical, trade and services workers rate poorly at the “transfers market”. Clerical support workers have the lowest prospective rate of continuation, which means that changing jobs, they show quite a powerful tendency to move to other job groups (professionals, technicians and other associated professionals, and service workers).

The data on prospective and retrospective rate of continuation are presented in Chart I.4.

Chart I.4.

Continued performance of the same occupation in prospective and retrospective approach (ISCO-1)



Sizes of circles reflect numbers of people in particular job categories after changing the employer. The dashed red lines indicate the average rate of prospective and retrospective continuation (both average rates are equal by definition, and amount to 49.8% in our data).

The chart refers to current job holders who changed their jobs in 2000–2012.

Source: BKL – Population Study 2010–2012.

For jobs situated above the diagonal, prospective rate of continuation is higher than retrospective one, which is tantamount to the fact that there are more people employed in these jobs after the change of the employer than there were before the change.<sup>32</sup> As can be seen, the prospective continuation ranking is topped by professionals: changing employment, they hardly ever move to other job groups, and nearly 70% of them continue working in the group. Moreover, professionals have also a high, higher than average, rate of retrospective continuation with nearly 60% of people employed as professionals performing work of the same type as previously after changing employers. In this aspect, professionals are second only to skilled workers, for whom the retrospective rate reaches nearly 70%. In this case, the situation of the clerical support workers lies on the other extreme, as continuation in this category belongs to the poorest in both ways: only 30% of the former staff continue working in the same category, with majority among the currently employed being the people who did something different in their previous employment (only every third previously had a job of similar nature).

To obtain a slightly more precise picture of transitions between occupations in the labour market, we conducted an analysis at the ISCO-2 level (40 sub-major job groups). Due to the vast size, we do not include detailed tables with counts and continuation rates. Summary of the continuation statistics is contained in Table I.12, and the visual comparison of occupations from the point of view of their prospective and retrospective continuation rates is provided in Chart I.5.

<sup>32</sup> If a, b, and c denote respectively the number of all people in a given job before changing it, people in a job after the change, and all those who retain the job both before and after the change, then the prospective rate amounts to  $c/a$ , and the retrospective rate – to  $c/b$ . The prospective rate is greater than retrospective if and only if  $b > a$ , i.e. when there are more people working in the given occupation after the change than before.

Table I.12.

Statistics recapitulating transfers between jobs/occupations in 2000–2012 (ISCO–2)

Change  
of occupational  
situation

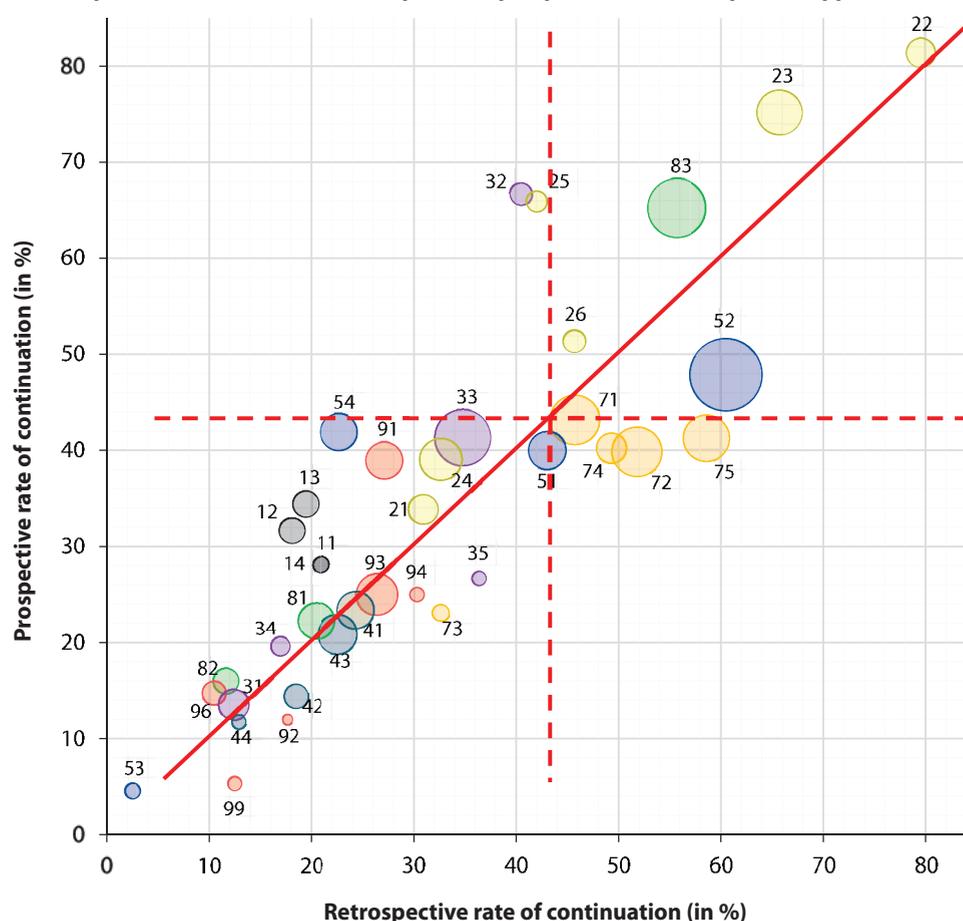
ISCO–1	ISCO–2	No. in occupation			Change (in %)	Continuation	
		was	is	Continuation		Pro-spective	Retro-spective
1 MANA	11 Chief executives, senior officials and legislators	32	43	9	34.4	28.1	20.9
	12 Administrative and commercial managers	60	105	19	75.0	31.7	18.1
	13 Production and specialised services managers	61	108	21	77.0	34.4	19.4
	14 Hospitality, retail and other services managers	32	43	9	34.4	28.1	20.9
2 PROF	21 Science and engineering professionals	127	139	43	9.4	33.9	30.9
	22 Health professionals	129	132	105	2.3	81.4	79.5
	23 Teaching professionals	278	318	209	14.4	75.2	65.7
	24 Business and administration professionals	228	273	89	19.7	39.0	32.6
	25 Information and communications technology professionals	44	69	29	56.8	65.9	42.0
	26 Legal, social and cultural professionals	72	81	37	12.5	51.4	45.7
3 ASSO	31 Science and engineering associate professionals	133	145	18	9.0	13.5	12.4
	32 Health associate professionals	48	79	32	64.6	66.7	40.5
	33 Business and administration associate professionals	414	492	171	18.8	41.3	34.8
	34 Legal, social, cultural and related associate professionals	51	59	10	15.7	19.6	16.9
	35 Information and communication technicians	45	33	12	–26.7	26.7	36.4
3 CLER	41 General and keyboard clerks	227	218	53	–4.0	23.3	24.3
	42 Customer services clerks	118	92	17	–22.0	14.4	18.5
	43 Numerical and material recording clerks	264	244	55	–7.6	20.8	22.5
	44 Other clerical support workers	34	31	4	–8.8	11.8	12.9
5 SERV	51 Personal service workers	240	223	96	–7.1	40.0	43.0
	52 Sales workers	1030	815	493	–20.9	47.9	60.5
	53 Personal care workers	22	40	1	81.8	4.5	2.5
	54 Protective services workers	117	216	49	84.6	41.9	22.7
7 CRAF	71 Building and related trade workers, excluding electricians	410	387	177	–5.6	43.2	45.7
	72 Metal, machinery and related trades workers	502	386	200	–23.1	39.8	51.8
	73 Handicraft and printing workers	65	46	15	–29.2	23.1	32.6
	74 Electrical and electronic trades workers	174	142	70	–18.4	40.2	49.3
	75 Food processing, wood working, garment and other craft and related trades workers	480	338	198	–29.6	41.3	58.6
8 OPER	81 Stationary plant and machine operators	193	210	43	8.8	22.3	20.5
	82 Assemblers	75	103	12	37.3	16.0	11.7
	83 Drivers and mobile plant operators	457	535	298	17.1	65.2	55.7
9 ELEM	91 Cleaners and helpers	149	214	58	43.6	38.9	27.1
	92 Agricultural, forestry and fishery labourers	25	17	3	–32.0	12.0	17.6
	93 Labourers in mining, construction, manufacturing and transport	284	269	71	–5.3	25.0	26.4
	94 Food preparation assistants	40	33	10	–17.5	25.0	30.3
	96 Refuse workers and other elementary workers	61	86	9	41.0	14.8	10.5
	99 [Elementary workers (not specified)]*	75	32	4	–57.3	5.3	12.5
Total		6797	6797	2749	0.0	40.4	40.4

\* Non-ISCO group covering people who declared that they are elementary workers and did not specify the type of job performed.

Source: BKL – Population Study 2010–2012.

Chart I.5.

Continued performance of the same occupation in prospective and retrospective approach (ISCO-2)



Sizes of circles reflect numbers of people in particular job categories after changing the employer. The dashed red lines indicate the average rate of prospective and retrospective continuation (both average rates are equal by definition, and amount to 40.4% in our data).

The chart refers to current job holders who changed their jobs in 2000–2012

Source: BKL – Population Study 2010–2012.

Two categories in Chart I.5 are notable for their highest continuation rates (both prospective and retrospective), namely health (22) and teaching (23) professionals. Generally, a vast majority (over 75%) of professionals from these groups still “do their job” having changed the employer. In the prospective approach, also the continuation rates of information and communications technology professionals (25), health associate professionals (32), and drivers and mobile plant operators (83) is high, higher than the average.

Another noteworthy fact is the positive balance in all but one subsets of the first three major job groups (managers, professionals, and technicians and other associate professionals) in “the transfers market” – after the change of jobs they contain more people than before the change. The phenomenon can be interpreted, at least partially, in terms of professional promotion or progress. It is best exemplified by administrative and commercial (12) and production and specialised services (13) managers whose “transfer surplus” reaches 75%. Although the prospective rate of continuation is relatively low here, these groups experience a relatively large inflow of staff from other groups. The exception from the rule mentioned earlier are information and communications technicians (35), with a negative balance reaching -26.7%. This “negative” result, however, has a very positive interpretation: a detailed analysis of the transfers shows that nearly 30% of information technologists who change employment start a new job as information and communications technology professionals (25), so what we encounter here is most likely a professional promotion or progress. A similar interpretation may be applied to some clerical workers (all subgroups

here have a negative “transfer balance”) as a significant proportion of people from this group moves to the business and administration associate professionals (33) or even to business and administration professionals (24) categories. At the same time, clerical support workers relatively often move “downwards in the hierarchy” (to the categories of sales workers, skilled workers, and drivers), which obviously does not necessarily amount to a financial depreciation, as the last two categories mentioned above enjoy relatively high salaries against clerical support workers [see: Czarnik, Turek, 2012, p. 37].

Another group of occupations with only negative transfer balances are skilled workers. The “losses” in these occupations result mainly from transfers to the groups of operators, elementary occupations, and service workers (sales workers and protective services workers), a shift that can be hardly interpreted in terms of professional promotion or progress, possibly with the exception of people moving to the group of technicians and other associate professionals (in science and engineering or business and administration). Operators, in turn, are a group with clearly positive balance, which may be related to an easier “entry” into the profession, compared to the skilled workers group, where experience can play a far greater role.

Worth noting is the record high transfer balance (+84.6%) achieved by protective services workers (54) – a group that features a retrospective continuation rate clearly lower than the average, which denotes a relatively strong inflow of people from other categories. A very high result (in excess of +40%) is also present in two categories of elementary occupations: cleaners and helpers (91), and refuse workers and other elementary workers (96).

## 5. Competency shortages

In this section, we examine the current competency needs of employers, and the difficulties they face in satisfying them. First we identify occupational categories in which employers find it most difficult to fill vacancies, and then we pinpoint competence deficits responsible for recruitment problems.

According to the information acquired from the employers, each year three in every four companies and institutions seeking candidates to the jobs experienced difficulties in finding appropriate candidates (75% in the autumn of 2010 and the spring of 2011, and 76% in the spring of 2012).

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**Table I.13.**

**Proportion of employers seeking employees in individual ISCO-2 job groups, who reported difficulties in recruitment**

ISCO-1	ISCO-2	2010		2011		2012	
		%	N	%	N	%	N
1 MANA	11 Chief executives, senior officials and legislators	91	13	40	22	93	5
	12 Administrative and commercial managers	67	6	91	14	98	19
	13 Production and specialised services managers	79	32	94	29	92	15
	14 Hospitality, retail and other services managers	43	11	87	3	98	5
2 PROF	21 Science and engineering professionals	60	101	92	107	79	105
	22 Health professionals	100	142	99	78	100	115
	23 Teaching professionals	98	32	91	22	92	32
	24 Business and administration professionals	57	139	61	53	77	123
	25 Information and communications technology professionals	93	67	87	36	94	56
	26 Legal, social and cultural professionals	54	29	76	15	67	73
3 ASSO	31 Science and engineering associate professionals	69	33	76	53	83	90
	32 Health associate professionals	96	39	99	53	99	18
	33 Business and administration associate professionals	77	192	85	191	80	188
	34 Legal, social, cultural and related associate professionals	76	13	57	43	41	39
	35 Information and communication technicians	12	43	88	25	70	14
4 CLER	41 General and keyboard clerks	52	106	96	58	63	48
	42 Customer services clerks	89	27	57	14	92	9
	43 Numerical and material recording clerks	66	50	81	40	47	49
	44 Other clerical support workers	88	5	2	13	61	8
5 SERV	51 Personal service workers	99	99	96	231	91	186
	52 Sales workers	84	170	89	261	88	202
	53 Personal care workers	12	3	98	7	100	28
	54 Protective services workers	85	17	88	6	84	1
7 CRAF	71 Building and related trade workers, excluding electricians	84	217	92	350	97	344
	72 Metal, machinery and related trades workers	78	158	94	169	87	189
	73 Handicraft and printing workers	93	5	97	3	86	13
	74 Electrical and electronic trades workers	71	46	89	77	93	114
	75 Food processing, wood working, garment and other craft and related trades workers	73	98	94	107	90	114
8 OPER	81 oper.masz.wydob/przetw	67	38	72	33	91	23
	82 Assemblers	99	22	81	18	98	19
	83 Drivers and mobile plant operators	87	280	94	203	86	220
9 ELEM	91 Cleaners and helpers	77	24	64	11	76	45
	93 Labourers in mining, construction, manufacturing and transport	37	41	46	99	78	65
	94 Food preparation assistants	74	19	52	17	65	33
	96 Refuse workers and other elementary workers	65	11	55	4	17	7

Notice: White type denotes results based on counts smaller than 40.

Source: BKL: Employer Study 2010-2012.

The data contained in Table I.13 show the percentage of employers seeking employees in a specific occupation who declared problems with finding people to perform such work. Thus, recurrent in all the years the worst problem lay with recruiting healthcare professionals and assistant professionals (physicians, nurses, pharmacists, and analysts), personal service workers (beauticians, hairdressers, cooks, and bartenders), and construction workers (of various specialties). Of job groups from the ISCO–1 level it was most difficult for the employers to find professional, service and sales workers, skilled workers, and assemblers and operators positions. Relatively least trouble was caused by elementary workers, although more than every other employer declared difficulties in finding them as well.

An examination of the reasons behind recruitment problems mentioned above, proves that they were chiefly caused by job applicants’ failure to meet employer expectations (Table I.14).<sup>33</sup>

**Table I.14.**  
**Percentage of employers with recruiting difficulties who declared the reason being the candidates’ failure to meet their expectations**

ISCO–1	2010		2011		2012	
	%	N	%	N	%	N
1 MANA	88	32	75	61	84	64
2 PROF	63	432	66	256	77	476
3 ASSO	83	244	70	253	84	369
4 CLER	78	125	52	84	94	83
5 SERV	91	237	78	439	85	552
7 CRAF	76	392	80	624	87	1008
8 OPER	76	294	77	204	83	369
9 ELEM	69	48	71	68	91	164
Total	76	1804	75	1989	85	3085

Source: BKL: Employer Study 2010–2012.

While analysing competency shortages, it makes sense to take a closer look at the expectations of employers who could not find appropriate candidates to work (Table I.15). Irrespective of the occupation to which they sought employees, employers usually complained on shortages of required competencies. The exception were candidates to clerical jobs, in whose case, the employers more frequently complained on lack of motivation to work. The case with people applying for jobs from the elementary occupations group was similar: also in their case, shortages concerned approach to work rather than appropriate skills.

Another obstruction in recruitment was the lack of appropriate experience. The problem concerns mostly recruitment to managerial and skilled worker positions (skilled workers and operators, and assemblers). The significance of this obstacle while seeking appropriate people to work remained invariable in all three years of the study.

In the last two rounds of the study, every fourth employer claimed also that one of the most important weaknesses in potential employees is simply lack of motivation to work.

<sup>33</sup> Other reasons that the employers could point to included lack of people seeking such employment, and dissatisfaction of job applicants with the conditions offered (especially of financial nature). Lack of candidates was most emphasised by the employers seeking professionals (with the problem visible more clearly in 2010 and 2011). Employers trying to recruit clerical support workers and elementary occupations complained also on the excessive pay expectations of job applicants.

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**Table I.15.**

**Major deficiencies in candidates for jobs in particular occupations as pointed out by employers  
in 2010–2012 (% of responses)**

	ISCO-1	Shortages in candidates failing to meet the expectations of employers:					N
		Competencies	Permits and licences	Experience	Motivation	Other	
2010	1 MANA	39	9	39	0	12	33
	2 PROF	49	9	15	9	19	348
	3 ASSO	53	6	16	23	2	203
	4 CLER	38	0	17	45	0	98
	5 SERV	47	5	19	27	2	216
	7 CRAF	44	1	33	17	5	346
	8 OPER	24	14	38	18	7	243
	9 ELEM	27	0	27	45	0	33
	Total	<b>43</b>	<b>6</b>	<b>24</b>	<b>19</b>	<b>7</b>	1520
	2011	1 MANA	35	14	43	0	8
2 PROF		40	17	17	12	14	197
3 ASSO		34	9	22	31	4	180
4 CLER		19	0	21	32	28	47
5 SERV		40	5	18	29	7	352
7 CRAF		37	7	23	29	4	531
8 OPER		33	10	35	20	3	156
9 ELEM		16	0	33	49	2	55
Total		<b>36</b>	<b>8</b>	<b>23</b>	<b>26</b>	<b>7</b>	1567
2012		1 MANA	37	4	21	32	7
	2 PROF	34	24	22	8	12	386
	3 ASSO	45	7	31	15	1	321
	4 CLER	29	13	27	31	0	78
	5 SERV	42	1	17	37	3	476
	7 CRAF	38	8	26	25	2	913
	8 OPER	24	13	40	16	7	316
	9 ELEM	13	8	2	74	3	153
	Total	<b>36</b>	<b>10</b>	<b>25</b>	<b>25</b>	<b>4</b>	2700

Source: BKL: Employer Study 2010–2012.

**Table I.16.**

**Competency shortages**

**Competency shortages in candidates for jobs in particular occupations**  
(in %, on a joint sample 2010–2012)

Competencies*	Group of occupations (ISCO-1)									Change 2011–2010*	Change 2012–2011*
	1 MANA	2 PROF	3 ASSO	4 CLER	5 SERV	7 CRAF	8 OPER	9 ELEM	Total		
[Occupational]	36	37	46	9	49	55	54	39	47	-10	18
Self-organisational	16	20	17	27	29	27	30	19	25	8	7
Interpersonal	11	7	17	30	33	4	8	36	14	3	-2
[Qualifications]	12	14	11	8	4	6	13	2	9	-4	-2
Cognitive	26	4	8	16	8	7	9	11	8	4	-2
Technical	0	2	5	0	6	16	4	1	8	6	-1
Computer	4	22	6	15	5	3	3	5	7	-2	0
Physical	0	2	7	0	5	8	10	9	6	-1	0
[Other]	1	3	5	0	5	4	12	10	5	-1	-4
[Language]	2	5	8	26	5	1	4	0	5	-1	1
Artistic	0	7	5	0	1	1	1	16	3	0	0
Managerial	15	0	3	0	3	4	0	9	3	3	-3
Availability	0	3	3	15	6	2	5	0	3	0	-1
Mathematical	0	1	6	5	2	0	2	0	2	-1	-1
Office	9	1	2	13	0	0	1	0	1	0	1
N	51	378	308	67	443	687	185	37	2155		

\* The questionnaire used the following definitions of the competencies: **cognitive** = finding and analysing information, and drawing conclusions; **self-organisational** = self-organisation of work and showing initiative, timeliness; **artistic** = artistic and creative skills; **physical** = physical fitness; **interpersonal** = contacts with other people; **managerial** = managerial skills and organisation of work; **availability** = availability; **office** = organising and running of office work; **technical** = operating, assembling, and repairing devices; **computer** = handling computer and using the internet; **mathematical** = performing calculations.

The last two columns contain differences between 2011 and 2010, and 2012 and 2011 for all categories merged; due to low counts, it was impossible to compare competency shortages for individual job categories.

Source: BKL: Employer Study 2010–2012.

Employers who complained on difficulties in recruitment related to the lack of certain skills in candidates seeking employment noted most frequently shortages of the following competencies:

- occupational – related to the specific qualities of activities performed in the given occupation (approx. every other employee pointed to shortages in the area)
- self-organisational – self organisation of work and showing initiative, timeliness, entrepreneurship, and resilience to stress ( whose shortage was mentioned by every fourth employer)
- interpersonal – contacts with people and cooperation in the group (every seventh employer mentioned their shortage).

It must be emphasised that among lacking competences, employers found also the ones they believe to be most necessary for work. The results originating from all the rounds of the BKL Study were relatively similar. There are, however, certain regularities visible. Growing in the successive years, was the problem of lacking self-organisational competencies including also what employers colloquially define as eagerness to work. In the last two rounds, the shortage of professional competencies was becoming clearer. In turn, there was a slight improvement in the area of interpersonal competencies.

## Summary

Juxtaposition of data on employer recruitment and competency needs and the data obtained from a nationwide study of working-age population allows us to say that the situation in the Polish labour market in 2010–2012 was stable. Each year, more or less the same number of employers sought people to work, and the structure of the demand was fairly stable. Skilled workers (especially construction), professionals (especially physicians), and service and sales workers were in greatest demand. On the supply side, there was also a fairly stable structure of occupations, strongly dominated by people seeking employment in trade and personal services. At the same time, it is somewhat discomfoting that the percentage of employers encountering difficulties in finding employees remains unchangingly high (approx. 75% of recruiting employers). The main reason for these difficulties also remains the same: lack of appropriate competencies among jobseekers. Every year, employers complain on the same shortages, namely, insufficient occupational (related to the specificity of the given job), self-organisational, and interpersonal competencies.

While competing for jobs, advantage is on the side of people with better education. Moreover, a mobility analysis shows that people with higher level of education strive to achieve occupational statuses corresponding to their aspirations.

A peculiar characteristic of the Polish labour market is the exceptionally early (compared to other countries) economic deactivation of the workforce. In this context, it is worth noting that economic activity is retained relatively longest by professionals (the category with the highest proportion of people with higher education), and people running their own businesses (entrepreneurs).

## Chapter Two

*Anna Strzebońska, Marcin Kocór*

# Professionals in the labour market. Requirements set up by employers

## Introduction

In the previous summarising reports, we presented results that accounted for data from the individual research modules to portray various characteristic features of the Polish labour market. In this chapter, however, we decided to assume a slightly different approach and – referring to the data from the employer and job offers studies – we present the specific characteristics of the labour demand referring to a single job group, namely professionals.<sup>34</sup> At the beginning, it is worth explaining why we decided to take interest in this category.

A new way of thinking about economy, being knowledge-based economy, became popular more or less in the 1970s. By that time, the classical understanding of economics had been dominated by production economy (knowledge economy vs. production economy) [Clark, 2011; OECD, 2001; Chen, Dahlman, 2005]. The difference consisted in the new model, unlike the traditional production economy, perceiving the source of profit generation in innovation and human capital. In line with the World Bank studies, there must be four basic elements present to speak of knowledge-based economy:

1. an appropriate economic support and a favourable system of institutions that allow proper allocation of resources and stimulate creativity and development of innovation
2. educated and skilled workforce that allows development of innovation
3. a system for designing and implementing innovation, i.e. HE institutions, research centres, and other institutions that allow the development and practical implementation of knowledge and innovation
4. an appropriate IT infrastructure to allow appropriate transfer and dissemination of knowledge [Chen, Dahlman, 2005, p. 4].

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<sup>34</sup> The name “professionals” refers to all employees covered by the second major job group, defined by the International Labour organisation as a part of the ISCO–08 standard (code 02 in the classification), irrespective of the specific job very perform.

## **Professionals in the labour market. Requirements set up by employers**

The authors of the document prepared for the World Bank emphasised that the key element contributing to the development of knowledge-based economy is human capital, which they defined through two indicators: the level of education enrolment ratio (at each level of education) and the level of competencies.

Innovativeness in knowledge-based economy requires highly skilled human resources operating in a favourable institutional environment, and encouraged with appropriate legal and organisational solutions, granted support from training and educational institutions, and using appropriate infrastructure. The high level of competencies and skills is most often expressed as a higher level of enrolment ratio at various levels of education. Increasing the level of education makes it possible not only to ensure economic growth but also to limit the poverty zone, positively influence the extension and improvement of quality of life, and generally: to reduce social pathologies. However, what goes hand-in-hand with the innovative quality of economy is not as much the general level of education enrolment ratio, but its specific aspect, namely, the share of people with higher education whose work is to a great extent related to holding jobs in the professional category. That is why it is important to take a closer look at what the Polish economy is like from the perspective of employers and their opinions about the quality of this group of human resources.

The studies conducted so far as part of the BKL project prove that professionals are among the most frequently sought employees [see: Kocór, Strzebońska, 2010; Kocór, Strzebońska, Keler, 2011; Kocór, Strzebońska, Dawid-Sawicka, 2012]. The share of this occupational category among all the additionally sought staff accounted for approximately 20–40% in 2010–2012. It can be said that more than every fifth Polish employer seeking staff declared the need to find a professional. This can be a proof that Polish economy is developing in the direction of greater innovation, which incurs a significant demand for professionals. It must be noted here that employers believe that recruitment of professionals is not easy. Relatively many (as many as 40%) employers seeking candidates to work and experiencing difficulties in finding appropriate people pointed to problems with finding the professionals they needed. Additionally, the costs of recruitment of such highly qualified staff is very high, and accounts for anything from 30% to 50% of the later remuneration of such a person [NBP, 2012].

In the light of the above, it is important that the situation of professionals in the Polish labour market is examined against the data from the successive years of the study, from 2010 to 2012. We present it from the employers' perspective: their demands and the requirements that they formulated towards this category of employees in job offers (vacancy advertisements). It is so as the analyses conducted so far prove that these two ways of forming requirements towards candidates – i.e. what is declared verbatim in reference to the needs, and the job offers – differ in the level of detail [see: Kocór, Strzebońska, Dawid-Sawicka, 2012]. Whether placed in online job portals or with labour offices, job offers may be treated as the first level of recruitment covering the broadest possible range of candidates. This concerns primarily seeking candidates for more specialist positions, in whose case selection is conducted in more direct manner. That is why, in our analysis, we will treat the information acquired from job offers as a certain point of reference concerning the requirements set for the professionals, which will be corroborated through declarations acquired from employee interviews. The only exception is the analysis of competency needs of the employers seeking professionals to be employed, as these requirements – especially the ones concerning specific, occupational competencies – were defined in job offers in greater detail.

### **1. Demand for professionals**

In the individual years covered by the studies, approximately a sixth of employers declared that they seek additional staff (17% in the autumn of 2010, and 16% both in the spring of 2011, and of 2012). One of the most frequently sought after job groups, as declared by employers interested in hiring new people, were professionals (see: Table II.1).

**Table II.1.**

**Employee demand of employers seeking additional staff to perform specific jobs  
(in %, based on the opinion of employers seeking additional staff)**

Occupation	2010	2011	2012
Managers	3	4	2
<b>Professionals</b>	<b>26</b>	<b>15</b>	<b>23</b>
<b>Technicians and other associate professionals</b>	<b>18</b>	<b>17</b>	<b>17</b>
Clerical support workers	13	7	7
Service and sales workers	18	25	21
Skilled workers	24	31	31
Operators and assemblers	15	14	15
Elementary workers	5	7	8
N	2559	2744	2704

*Notice: As one could seek employees for different positions, the percentages do not sum up to 100.*

*Source: BKL: Employer Study 2010–2012.*

Every fourth employer declaring readiness to employ additional personnel sought professionals. The tendency changed in 2011, due to a significant increase in the demand for workers of various categories, which was caused by investments related to the preparations to the Euro 2012 Championships. Accounting for candidates sought for positions of technicians and other associate professionals,<sup>35</sup> professionals (in the broad sense of the term) were most frequently sought: approximately 40% of employers seeking new staff were looking for people from that group.

Worth mentioning is also the estimation of the number of professionals, including technicians and other associate professionals, whom the labour market needs.<sup>36</sup> Asked about the number of professionals that they would like to employ additionally, employers reported approximately 185,000 such people in 2010, 158,000 in 2011, and approximately 180,000 in 2012. However, quoting these data one needs to realise that they concern a certain period: the moment when the study was conducted (more or less one quarter of the year). This may mean that the demand for professionals is different outside this window. This is shown in the data on employer forecasts of future employment.<sup>37</sup> In the following quarter, employers planned employment of further 220,000 people on professional positions (including associate professionals). Similarly, the comparison between the first and the following two rounds of the study shows such a seasonal variation in demand for professionals. In the autumn of 2010, when the studies were conducted for the first time, the demand for professionals, as reported by the employers, was far greater than in the following two periods when the studies were conducted, that is in the spring of 2011 and of 2012. This must have resulted from a greater share of seasonal works at the time and, consequently, a different structure of employee demand.

If we examine the demand concerning jobs as formed by various employers, it is clearly visible that among all the employees professionals were especially sought by employers from businesses and institutions employing more than 50 people (Table II.2).

<sup>35</sup> Occupations in this general category defined by the International Labour Organisation in the ISCO–08 standard require as high competencies, qualifications, and education as professionals. For example, this category includes airliner pilots, which is a more “professional” occupation than kindergarten teachers.

<sup>36</sup> It must be remembered, however, that there is a large variety of population weights, which makes this data only an indicator of the general demand for labour. To learn more about the weights applied, turn to the methodological introduction of the study [Kocór, Strzebońska, Dawid-Sawicka, 2012].

<sup>37</sup> Employers who were not looking for additional candidates to work in the spring of 2012 were asked whether they would be looking for someone in the successive three months, and if so – who and how many.

**Professionals in the labour market. Requirements set up by employers**

**Table II.2.**

**Demand for professionals among all the employees sought as declared by employers seeking additional staff in businesses of various size (in %, based on the opinions of employers seeking additional people to work, combined samples from 2010–2012)**

Professional positions	1–9	10–49	50+
Science and engineering professionals	5	4	12
Health professionals	5	3	9
Teaching professionals	2	5	6
Business and administration professionals	5	6	15
Information and communications technology professionals	3	2	4
Legal, social and cultural professionals	2	1	2
N	7335	441	188

Source: BKL: Employer Study 2010–2012.

This concerns mostly business and administration professionals, engineers (science and engineering professionals), and health professionals. The demand for such staff declared by smaller employers did not vary much, and was nearly the same in the individual years. Interestingly, also the forecasts concerning the future three months were nearly identical as far as the hiring of additional staff was concerned.

In the case of types of activity conducted, a certain variety in the demand for professionals related to the specific features of the sector can be shown (Table II.3). When taking into account the total demand for employees, it can be said that the largest demand for professionals was declared by employers in the education sector: they sought primarily teachers and other teaching professionals, and by the employers from the human health and social work sectors who sought physicians. Standing out among the remaining sectors was the activity related to the provision of specialist services. In this case, employers proved large interest in all professionals, with the exception of physicians and teachers. In the remaining sectors, it is hard to pinpoint clearly visible trends. In the breakdown into individual years, no major changes were visible in the dependencies described here.

**Table II.3.**

**Demand for professionals among all the employees sought as declared by employers seeking additional staff in various sectors (in %, combined samples from 2010–2012)**

Professional positions	Manufacturing and mining	Construction and transport	Hospitality, retail and other services	Specialised services	Public education	Private education	Human health and social work
Science and engineering professionals	6	3	1	12	1	2	1
Health professionals	0	0	3	2	3	0	62
Teaching professionals	0	0	0	1	70	50	5
Business and administration professionals	4	1	4	13	2	12	6
Information and communications technology professionals	1	0	1	9	2	0	0
Legal, social and cultural professionals	0	1	0	5	5	20	3
N	1318	1932	2052	1901	72	120	510

Notice: Lighter colour of the font denotes cells with counts below 100.

Source: BKL: Employer Study 2010–2012.

What remains a separate question is the demand for professionals as reported by employers from companies at various levels of development.<sup>38</sup> It is significant as, as was remarked in the introduction, the innovative economy is to a great extent based on highly skilled staff, especially holding professional positions. Generally speaking, it can be said that developing companies more often sought additional people to professional positions. This is especially true about the strongly developing ones, where every third candidate sought was a professional; and if technicians and associate professionals are included, thus construed professional categories accounted for a half of the recorded demand. This was true for all the rounds of the study, with a drop in the observed tendency in the spring of 2011, when Polish economy as such displayed a greater demand for various categories of workers, for which reason the demand for professionals was lower (40% of strongly developing companies sought such staff).

## 2. General requirements set up for professionals by employers

Having defined employer demand for professionals and the factors that influence it, it is worthwhile to take a look at the requirements that were formulated towards the candidates to such work. As it was observed in the introduction, the analyses presented here are conducted in a number of steps. First, we compare the general requirements formed by the employers in direct responses and in the job offers.<sup>39</sup> Assuming that the published job offers provide the first selective filter in the process of seeking candidates to professional positions, an analysis of such a type of requirement serves pointing the divergences between this source of data and the actual expectations of employers mentioned in the interviews.

In the successive step, we analyse the competency needs of employers related to work on professional positions. Also in this case, the analysis makes use of both sources of information: declarations obtained from employers and requirements concerning competencies included in job offers. Nevertheless, in this case, the offers placed online and in the County Employment Offices will be a source of more precise information, as information obtained from employers during telephone interviews was limited due to their duration. In turn, job offers made it possible to become familiar with employer competency requirements in greater detail.

Before discussing the individual criterion of selection in detail, a look at the general picture of employer requirements towards candidates to professional positions is due. In the study, they were asked about their preferences concerning a number of most important criteria: the level of education, experience gained (duration of experience at work), sex (whether men or women were preferred for a given position, or whether sex was immaterial), and command of a foreign language. The chart below (Chart II.1) presents the answers of employers seeking people to work at various professional positions, who moreover found these criteria important.

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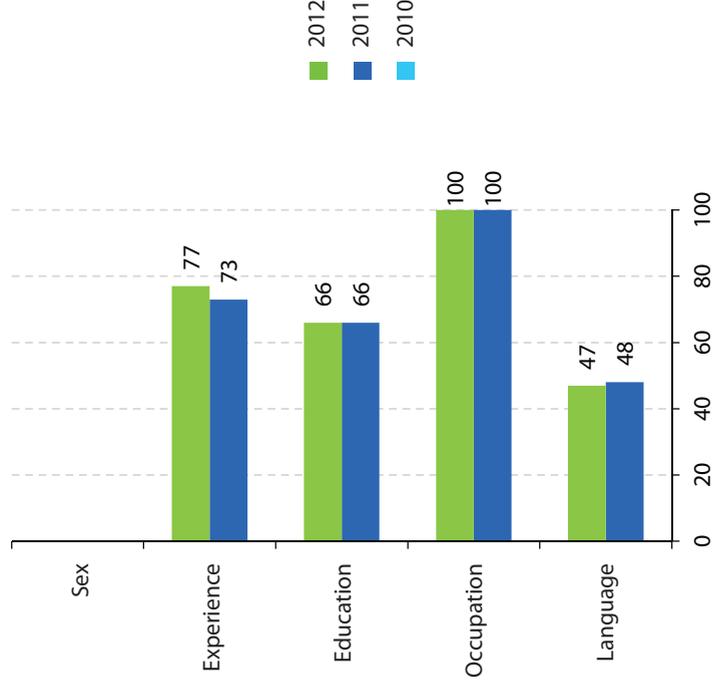
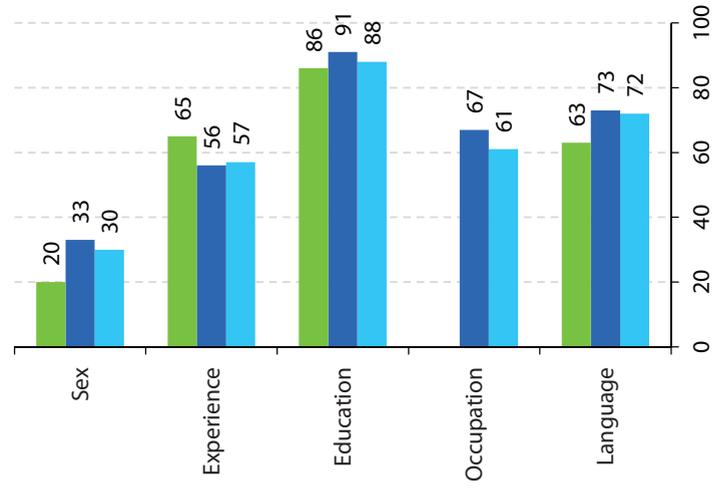
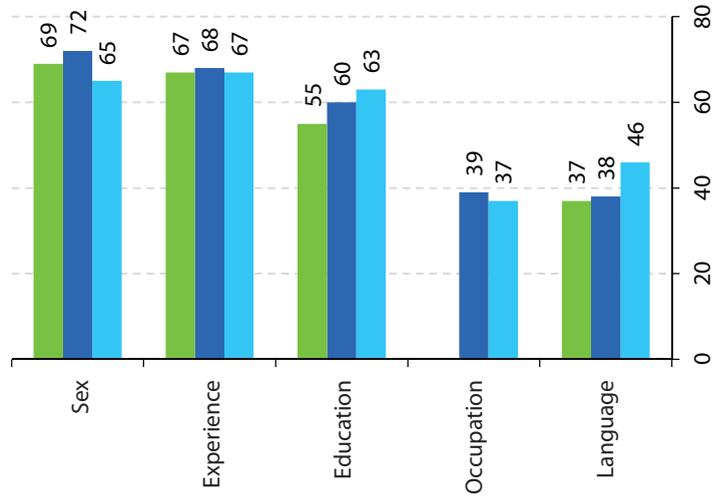
<sup>38</sup> The level of company development was defined on the grounds of three constituent elements: 1) introduction of innovation: new products, services, and/or means of production; 2) increase in employment; and 3) demonstrating (in the assessment of representatives) an increase in profits (in 2010 and 2011 studies) or revenue (2012 studies). Based on the above, the company development index was calculated. The index assumes four levels: (1) strongly developing companies meeting all the three conditions; (2) stagnant companies – meeting none of the above, and the intermediate levels of development (3) “developing” and (4) “poorly developing”, i.e. meeting one or two of the conditions described above. As the category of profits/revenue was used, the index was calculated only for companies, while other types of organisations were excluded from the analysis.

<sup>39</sup> We would like to remark that due to the exhaustive nature of the sample covering all the job offers published in the period covered by the study, all investigations of job offers use non-weighted data. The comparisons concern the data from 2011 and 2012, as they were collected at the same point in time (the fourth Monday of March). The adequacy of comparing these two measurements is even higher, as such data acquisition eliminated the problem of annual cycle seasonality in demand for labour.

**Professionals in the labour market. Requirements set up by employers**

**Chart II.1.**

General requirements declared by employers towards candidates to professional posts



**Total**

**Professionals – as declared**

**Professionals – as in job offers**

Data in %, for total data:  $N_{2010} = 2478$ ,  $N_{2011} = 5138$ ,  $N_{2012} = 4912$ , for professionals as declared:  $N_{2010} = 549$ ,  $N_{2011} = 326$ ,  $N_{2012} = 836$ , for professionals as in job offers  $N_{2011} = 4644$ ,  $N_{2012} = 5445$ .

Source: BKL: Employer Study 2010–2012, Job Offers Study 2011–2012.

For the sake of comparison, expectations towards all the staff were juxtaposed with expectations towards candidates for professional positions, both as defined in job offers and as declared in employer studies. Such requirements clearly diverged in the case of professionals and the jobseekers total. In interviews, in the process of seeking professionals, employers found the level of education most important, followed by experience and command of a foreign language. As it turned out, most employers found sex immaterial.<sup>40</sup>

Worth noting is the fact that the level of education is of absolutely different magnitude when recruiting professionals, compared to the totality of candidates to work. The criterion was important for more than four in every five employers, although – which is visible in the categories of employees sought – its significance decreases in the selection of candidates. Therefore, it seems that also the employers seeking professionals to be employed perceive a gradual deterioration in the level of education and begin to take other criteria, primarily job experience, into account. This hypothesis was justified by the employers’ focus on the requirements defined in job offers, where professional experience was more important than the candidates’ education.

Below we present detailed requirements concerning the individual criteria, beginning with the most important as declared by the employers.

## 2.1. Requirements concerning the level of education

In the answers they provided in interviews, the employers far more often accepted first cycle higher education (engineer and bachelor degrees) of candidates to professional jobs than they did in the requirements included in job offers (Table II.4). An analysis of the criteria included in the adverts in 2012 permits a statement that what counted most in this case was the master degree. Especially large divergences are visible in the case of candidates to business and administration professional positions.

**Table II.4.**

**The difference in requirements concerning the level of education of candidates to professional positions between employer declarations and information contained in job offers in 2012 (in percentage points)**

Professional positions	Basic vocational	Secondary	Baccalaureate	Higher (master degree)
Science and engineering professionals	13	-11	23	-26
Health professionals	0	-15	4	12
Teaching professionals	-24	3	29	-6
Business and administration professionals	0	-7	42	-34
Information and communications technology professionals	0	10	18	-27
Legal, social and cultural professionals	-1	-5	-1	9

*Notice: Positive values denote that the expectations concerning the level of education of candidates to work in a given job are greater in employer study than in the requirements published in job offers, while negative values denote higher expectations in the job offers.*

Source: BKL: Employer Study 2012 and Job Offers Study 2012.

It is worth noting that the employers’ answers concerning education-related requirements varied, depending on whether the answers were given during the interviews or included in job offers. In the interviews, employers more frequently declared higher education requirements (Table II.5). Employers would employ

<sup>40</sup> For obvious reasons, the question of the candidates’ sex was introduced only during the interviews, by asking the respondents whether they would prefer a woman or a man to a position, or whether the sex would be immaterial.

**Professionals in the labour market. Requirements set up by employers**

professionals in science and engineering fields with basic vocational education only in isolated cases. It is clearly visible and significant that both the declarative opinions and the objective ones – contained in job offers – differed most in the area of first or second cycle higher education required from candidates for professionals. Second cycle higher education was especially important for employers in the case of two professional job groups: health professionals, and legal social and cultural professionals. This case concerned specific jobs, namely, physicians and lawyers. In these occupations, it is hard to imagine people without completed five-year studies. Yet a comparison of the opinions of employers acquired from interviews conducted in the last two rounds of the study makes it possible to observe a growing acceptance for first cycle HE degrees, paralleled by a reduction in employer requirements concerning the necessary level of education.

**Table II.5.**

**Requirements concerning the level of education of candidates sought to work on professional positions (in %, based on the opinions of employers seeking professionals, and making specific requirements concerning level of education)**

	Professional positions	Primary	Basic vocational	Secondary	Higher (Bacc.)	Higher (master degree)	N
2011	Science and engineering professionals	0	0	7	14	79	84
	Health professionals	0	0	5	5	91	88
	Teaching professionals	0	0	0	32	68	31
	Business and administration professionals	0	0	19	35	46	69
	Information and communications technology professionals	0	0	13	13	75	8
	Legal, social and cultural professionals	0	0	0	0	100	18
2012	Science and engineering professionals	0	14	3	25	58	64
	Health professionals	0	0	10	11	79	140
	Teaching professionals	0	0	11	37	53	38
	Business and administration professionals	0	0	28	44	28	100
	Information and communications technology professionals	0	0	17	20	63	35
	Legal, social and cultural professionals	0	0	12	7	82	60
Change 2012–2011	Science and engineering professionals	0	14	–4	11	–21	
	Health professionals	0	0	6	6	–12	
	Teaching professionals	0	0	11	5	–15	
	Business and administration professionals	0	0	9	9	–18	
	Information and communications technology professionals	0	0	5	8	–12	
	Legal, social and cultural professionals	0	0	12	7	–18	

*Notice: The line “Change 2012–2011” contains the difference between the proportion of employers who required a given level of candidate education in 2012 and in 2011. A positive value denotes a larger number of candidates sought for the specific professional position in 2012, and a negative – a smaller number. Lighter font colours mark cells with counts below 50.*

*Source: BKL: Employer Study 2011–2012.*

The situation is reversed when we look at the requirements concerning the level of education in candidates to professional occupations defined in job offers. The year 2012 saw a marked increase of requirements towards candidates to such jobs: they had to prove second cycle higher education (Table II.6). The dissatisfaction of recruiters with the level of candidates with bachelor degrees led to the resignation from the “level of education” criterion in the process of selection. For example, more than one in every other job

offer addressed to legal, social and cultural professionals contained no requirements concerning the level of education.

## Requirements concerning the level of education

One needs to remember that the requirements concerning the level of candidates' education differ depending on the channel of recruitment used by the employer. Applying the first and coarsest filter of selection, namely seeking professionals through job offers, employers imposed a higher level of requirements concerning the level of education to filter off all the people not meeting the requirement. Later, in job interviews, as the declarations collected in the study proved, they lowered expectations and would actually be ready to employ people with first cycle higher education to professional positions.

**Table II.6.**

**Requirements concerning the level of education of candidates sought to work on professional positions formed in job offers (in %, as in job offers addressed to professionals)**

	Professional positions	No requirements	Basic vocational	Secondary	Baccalaureate	Higher (master degree)	Post-graduate	N
2011	Science and engineering professionals	28	0	15	41	13	2	658
	Health professionals	46	0	12	29	4	5	241
	Teaching professionals	31	0	7	54	0	6	360
	Business and administration professionals	33	0	25	37	3	2	2231
	Information and communications technology professionals	38	0	6	44	8	3	955
	Legal, social and cultural professionals	35	0	7	47	0	11	199
2012	Science and engineering professionals	20	1	11	1	67	0	816
	Health professionals	41	0	14	4	39	0	208
	Teaching professionals	45	13	4	5	32	0	218
	Business and administration professionals	33	0	24	1	42	0	2708
	Information and communications technology professionals	40	0	4	1	53	0	1345
	Legal, social and cultural professionals	53	1	8	4	35	0	150
Change 2012-2011	Science and engineering professionals	-8	1	-4	-40	54	-2	
	Health professionals	-5	0	2	-25	36	-5	
	Teaching professionals	14	13	-3	-50	32	-6	
	Business and administration professionals	0	0	-1	-35	38	-2	
	Information and communications technology professionals	2	0	-2	-43	46	-3	
	Legal, social and cultural professionals	17	1	1	-43	35	-11	

*Notice: The line "Change 2012-2011" contains the difference between the proportion of employers who required a given level of candidate education in 2012 and in 2011. A positive value denotes a larger number of candidates sought for the specific professional position in 2012, and a negative – a smaller number.*

Source: BKL – Job Offers Study 2011-2012.

In the case of requirements concerning the level of candidate education, it is material to pay attention not only to its level but also to the profile. Such information can be obtained from the analysis of job offers in 2012 presented in Table II.7.

**Professionals in the labour market. Requirements set up by employers**

**Table II.7.**  
Requirements concerning education profile: secondary and higher education (master degree) requirements defined in job offers in 2012 (in %)

Professional positions	Secondary education				Higher (master degree)			
	% total	in this		N	% total	in this		N
		general	technical			non-technical	technical	
Science and engineering professionals	11	57	43	89	67	46	54	548
Health professionals	14	50	50	30	39	98	2	82
Teaching professionals	4	78	22	9	32	97	3	70
Business and administration professionals	24	92	8	637	42	89	11	1132
Information and communications technology professionals	4	77	23	60	53	75	24	718
Legal, social and cultural professionals	8	92	8	12	35	100	0	52
Total	15	85	15	837	48	77	23	2602

Notice: Lighter font colour denotes cells with counts below 50.

Source: BKL – Job Offers Study 2012.

The data concern only employee requirements concerning secondary and higher (master degree) education of the candidates, broken down into two basic categories of fields of education: technical and non-technical (with general education present only in the case of secondary education). A decided majority of the offers contained expectations concerning non-technical education. The exception were the offers dedicated to specialists in science and engineering, in whose case, quite logically, requirements concerning higher technical education were slightly dominant. Employer preferences in this scope prove that – as far as professionals in the labour market are concerned – there is room for graduates of non-technical studies, yet on the condition of meeting other criteria.

## 2.2. Requirements concerning the command of foreign languages

As results from the interviews with the employers, the command of a foreign language came as the second most important requirement from candidates to work on professional positions. It is, however, worth emphasising that the significance of this criterion was diminishing in the successive years of the study. Compared to the declarations made directly, the requirement of command of foreign language in job offers was of far smaller significance as a criterion applied to professional jobs candidates.

**Table II.8.**

**Differences in requirements concerning the command of a foreign language by candidates to professional positions between employer declarations and information contained in job offers (in percentage points)**

**Requirements concerning the command of foreign languages**

Professional positions	2011					2012				
	Employers		Job offers		Difference	Employers		Job offers		Difference
	%	N	%	N	%	%	N	%	N	%
Science and engineering professionals	65	108	58	658	7	32	82	56	816	-24
Health professionals	72	88	12	241	60	61	140	12	208	49
Teaching professionals	44	31	14	360	30	40	50	13	218	27
Business and administration professionals	80	70	33	2231	47	83	132	33	2708	50
Information and communications technology professionals	85	26	67	955	18	85	65	66	1345	19
Legal, social and cultural professionals	78	18	41	199	37	45	69	41	150	4

*Notice: The column "Difference" contains the difference between the proportion of the presence of the requirement of command of a foreign language between employer declarations in the study and the job offers. A positive value denotes that (in a given year of the study) the expectation concerning the command of foreign languages in the employer study was greater than in the requirements published in job offers, and a negative one – that it was smaller. Lighter font colour denotes cells with counts below 50.*

Source: BKL: Employer Study 2011–2012 and Job Offers Study 2011–2012.

The skill of using a foreign language was most useful for information and communications technology professionals: this was the opinion of 85% of employers seeking candidates to work on such positions, with the requirement being present in approximately 67% of job offers addressed to this job group (Table II.8). Similarly high expectations were published by employers in the case of business and administration professionals, yet – which is significant – the requirement was present only in a third of job offers addressed to such people. The command of a foreign language was relatively least useful in employing teaching professionals. Yet even in this case, when interviewed, two in every five employers considered the skill useful, while only 14% of offers advertising such vacancies concerned the requirement of using a foreign language at the first level of recruitment.

An interesting fact is the significance of language requirements in the case of recruiting science and engineering professionals, falling down from year to year, as observed in both data sources. Generally speaking, in their declarations, employers reduced their expectations by a half, while the change at the level of job offers concerns only 2% of the employers. Such a divergence would require corroboration in further studies.

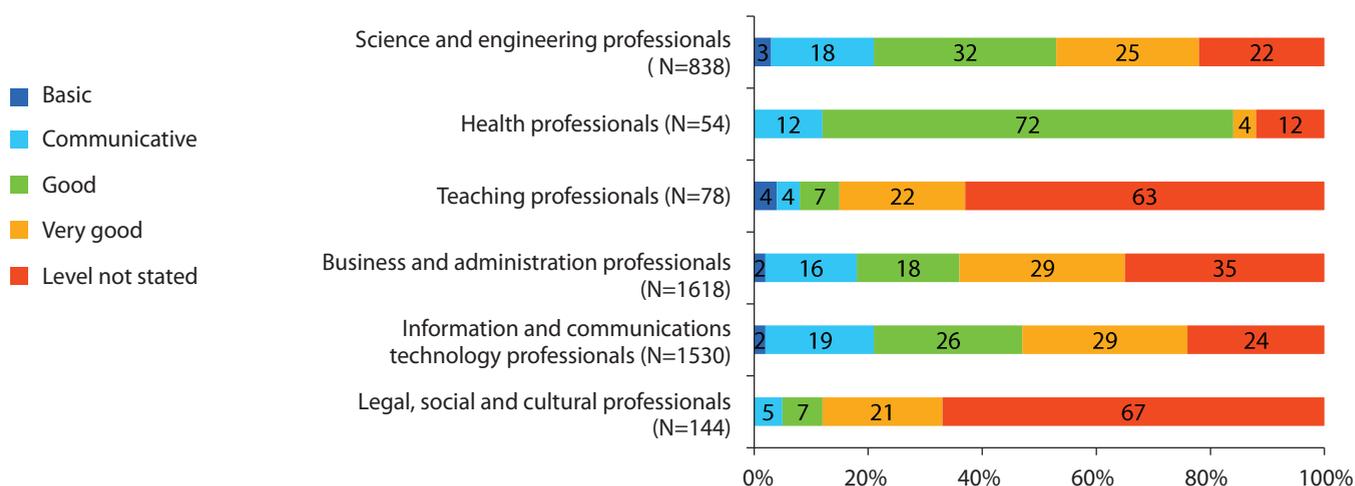
The languages that the employers deemed necessary most often, irrespective of the job and data source are – in order of appearance: English, German, and French. An interesting curio is the fact that requirements concerning Russian were most often made known by employers seeking various teachers and educators.

Requirements concerning the knowledge of a foreign language formed by employers in job offers addressed to professionals are worth an insight. Generally, it must be said that there were no major differences in requirements at the first level of recruitment in 2011 and 2012 (see: Table II.8), for which reason the distribution of expectations concerning the level of command of a foreign language published in the job offers is presented collectively for both years of the study (Chart II.2.) What immediately attracts attention is the fact that not all the employers formed such requirements towards individual professionals. The best descriptions were given to health, science and engineering, and information and communications technology professionals. In turn, in the case of teaching, and legal, social and cultural professionals, only approximately 40% of offers list specific requirements concerning the level of foreign language command.

**Professionals in the labour market. Requirements set up by employers**

**Chart II.2.**

**Requirements concerning the level of command of a foreign language by candidates sought to professional positions, the grounds of information contained in job offers (in %, for the combined 2011 and 2012 sample)**



Source: BKL – Job Offers Study 2011–2012.

The best level – good or very good – was required from health professionals, engineers, and information and communications technology professionals. Such a level of language requirements remains in line with the general characteristics of work in such professions, where the use of a foreign language in the daily duties is often not as much a strong point as a necessity.

**2.3. Requirements concerning experience on the job**

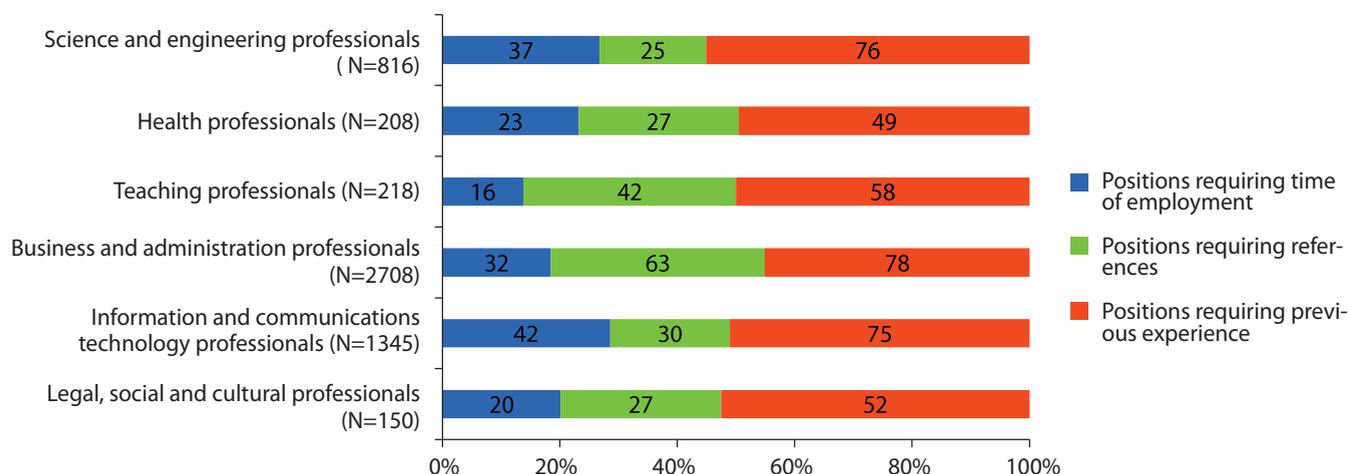
The experience on the job ranked next among employer requirements towards candidates to professional jobs disclosed in interviews. The fact that this criterion of candidate assessment was not that as important as in the case of the totality of candidates to work is worth attention. Moreover, the significance of this requirement was gradually growing in the successive rounds of the study, both in the answers acquired from employers in direct interviews and in the criteria formed in job offers.

The basic difference between employer declarations and the information contained in job offers is the way of understanding previous employment experience. In interviews, employers asked about previous employment experience measured by time of employment in a given occupation, while in job offers, the employers frequently treated such experience at par with references, without forming any requirements concerning the number of years of experience. This is well illustrated in the Chart II.3. References from the previous place(s) of employment were far more often required, especially in the case of positions dedicated to business and administration professionals.

**Chart II.3.**

**Distribution of positions offered with required experience and specified time in employment in 2012 (in %)**

**Requirements concerning experience on the job**



Source: BKL – Job Offers Study 2012.

Table II.9. shows the duration of previous employment experience expected from candidates to professional jobs. Generally, it can be stated that – compared to other occupations to which recruitment was conducted – employers required a slightly longer employment, i.e. approximately 2 years, while in the case of other staff, the period was more or less 1.5 year (with longer previous employment experience being expected only from managers). Longest experience, nearly 3 years, was required from physicians and nurses, and engineers (i.e. science and engineering professionals) – over 2 years. The longest previous employment experience was needed to work as an information and communication technology professional, business and administrative professional, and teaching professional – approximately 1 1/2 year. It is worth noting that expectations concerning the duration of previous work experience published in job offers did not differ much from the requirements mentioned by the employers in interviews. The only major divergence concerns the description of positions dedicated to business and administration professionals and those from the ICT sector. In their case, job offers included a condition concerning experience on average longer by anything from 1/2 to 1 year, compared to the declarations made by the employers in interviews.

**Professionals in the labour market. Requirements set up by employers**

**Table II.9.**  
**Divergences in requirements concerning previous employment experience of candidates sought to professional jobs between employer statements and information in job offers (arithmetic means)**

Professional positions	2011					2012				
	Employers		Job offers		Difference	Employers		Job offers		Difference
	Average	N	Average	N	Average	Average	N	Average	N	Average
Science and engineering professionals	2.3	108	2.5	208	-0.2	2	82	2.3	305	-0.3
Health professionals	2.7	88	2.9	54	-0.2	3.8	140	2.7	48	1.1
Teaching professionals	2.2	31	2.1	108	0.1	1.4	50	1.6	34	-0.2
Business and administration professionals	1.8	70	2.3	815	-0.5	1.5	132	2.1	880	-0.6
Information and communications technology professionals	1.3	26	2.1	402	-0.8	1.5	65	2.5	561	-1
Legal, social and cultural professionals	2.2	18	2.4	61	-0.2	1.2	69	2.7	30	-1.5

*Notice: The column "Difference" contains the difference between the average value of the duration of previous employment experience between employer declarations in the study and the job offers. A positive value denotes that (in the given year of the study), the expectation concerning the duration of previous employment experience in the employer study was greater than in the experience-related requirements published in job offers, and a negative one – that it was smaller. Lighter font colour denotes cells with counts below 50.*

Source: BKL: Employer Study 2011–2012 and Job Offers Study 2011–2012.

It is also worth taking a look at how the requirements concerning employment experience of candidates to professionals are presented depending on the sector to which such employees were sought (Table II.10).

Compared to the situation in the previous year, visible in 2012 was the reduction of the number of the positions offered, with the requirement of previous employment experience in each sector where candidates to professional positions were sought. Reduction of the role of previous employment experience in the process of recruitment is especially well visible in the offers from the educational sector, especially to the positions related to business and administration (reduction by 21%) and teaching (reduction by 17%). Even clearer is the decrease in the significance of previous employment experience in the case of candidates to work in legal, social and cultural professions seen in the offers acquired from the specialised services sector. Compared to the situation from the previous year, the difference concerns no fewer than 42% of the offers. The situation is similar in offers addressed to health professionals in sectors related to human health and social work (a drop by 37%).

Resignation from this criterion of selection in job offers makes it possible to expand the first stage of enrolment to include graduates with no employment experience. Yet in the opinion of employers – as the interviews prove – these are primarily the candidates with a year's employment experience (at the post for which they apply) who can actually count on employment.

**Table II.10.**

**Proportion of job offers to individual professional positions that contain requirements concerning previous employment experience, broken down by the employer's sector (in %, for jobs with at least 20 advertised vacancies)**

**Requirements concerning candidate gender**

Professional positions		Manufacturing and mining		Construction and transport		Hospitality, retail and other services		Specialised services		Education		Human health and social work	
		%	N	%	N	%	N	%	N	%	N	%	N
2011	Science and engineering professionals	82	311	77	153	80	51	80	109	86	7	25	4
	Health professionals	69	29	91	11	93	68	88	16	89	9	87	107
	Teaching professionals	71	7	0	0	75	4	79	28	75	311	88	8
	Business and administration professionals	78	371	91	91	75	216	69	1421	79	72	67	15
	Information and communications technology professionals	82	104	71	14	55	29	84	796	0	0	0	0
	Legal, social and cultural professionals	67	6	80	5	100	8	87	141	91	11	100	9
	<b>Total</b>	<b>80</b>	<b>828</b>	<b>82</b>	<b>274</b>	<b>78</b>	<b>376</b>	<b>75</b>	<b>2511</b>	<b>77</b>	<b>410</b>	<b>84</b>	<b>143</b>
2012	Science and engineering professionals	80	225	78	105	80	90	75	104	100	4	100	2
	Health professionals	67	9	0	0	41	22	73	26	44	9	50	68
	Teaching professionals	0	0	0	0	50	2	81	16	58	133	64	11
	Business and administration professionals	89	243	79	75	81	450	79	1192	58	96	85	33
	Information and communications technology professionals	75	55	80	20	77	202	74	639	71	7	0	0
	Legal, social and cultural professionals	100	4	100	6	75	4	45	88	0	0	67	3
	<b>Total</b>	<b>83</b>	<b>536</b>	<b>79</b>	<b>206</b>	<b>78</b>	<b>770</b>	<b>76</b>	<b>2065</b>	<b>58</b>	<b>249</b>	<b>63</b>	<b>117</b>
Change 2012-2011	Science and engineering professionals	-3		1		0		-5		14		75	
	Health professionals	-2		-91		-52		-14		-44		-37	
	Teaching professionals	-71		0		-25		3		-17		-24	
	Business and administration professionals	10		-13		6		10		-21		18	
	Information and communications technology professionals	-7		9		22		-10		71		0	
	Legal, social and cultural professionals	33		20		-25		-42		-91		-33	
	<b>Total</b>	<b>3</b>		<b>-3</b>		<b>1</b>		<b>0</b>		<b>-18</b>	<b>-</b>	<b>-21</b>	

Notice: The line "Change 2012–2011" contains differences between the proportion of job offers that required previous experience from candidates in 2012 and in 2011. A positive value denotes that more people were sought to a given professional job in 2012, and a negative – that more were sought in 2011. Lighter font colour denotes cells with counts below 50.

Source: BKL – Job Offers Study 2011–2012.

#### 2.4. Requirements concerning candidate sex

The criterion that the employers found least important in candidate assessment for professional jobs was the candidate's sex. Only for every third (and in 2012, only for every fifth) employer it was material whether the person applying for the job was a woman or a man. Examining the total of employees sought, it was definitely a question of lesser importance, which, however, results from the nature of such jobs: while in the case of workers, strength and physical fitness (characteristic of men) are important, professionals are required to use intellectual efficiency, which is independent of sex. However, certain regularities may be noticed in requirements concerning the sex of candidates to work as professionals. Generally, these were more often men who were sought to work as IT professionals. In turn, women were preferred as teachers, and business and administration professionals.

As required by law, this type of requirements was not present at the stage of recruitment through job offers.

### 3. Competency-related requirements for professionals

Besides the general requirements formed by employers towards candidates to professional jobs (concerning level of education, command of foreign languages, experience, and sex), it is worth taking a closer look at requirements concerning competencies. As competency requirements have not changed in the three successive rounds of the study, this time we present the results in the inverted order: first, the general declarations of the employers concerning competency requirements, and then the more detailed data acquired from the clauses employers included in their job offers. It is so as the latter source of information was more precise and made it possible to present competency requirements of the employers in greater detail.

As mentioned above, the declarations obtained from employers in all the rounds of the study and concerning the competencies necessary to perform professional jobs did not differ, which made it possible to present joint results for the aggregated sample (Table II.11).

It is clearly visible that what counted most, much like in the case of candidates sought to basically any job [see: Kocór, Strzebońska, Dawid-Sawicka 2012], were three types of competencies:

1. interpersonal: related to communication, cooperation in a group, and communicativeness
2. self-organisational: requiring proper organisation of own work, entrepreneurship, proving initiative, and generally concerning motivation to work
3. occupational: specific competencies proper for the given job (e.g. familiarity with specific software in the case of engineers).

These competencies were actually paid most attention to independent of the type of the professional sought. Information and communications technology professionals and science and engineering professionals were an exception here, as in their case computer competencies were strongly required. Moreover, such professionals were expected to have also cognitive competencies, i.e. the skill of analysing information, drawing conclusions, and quick thinking and learning. In turn, they were expected to have a lower degree of interpersonal competencies than is the case with other professionals, which results from the specific nature of their work, which does not require frequent contacts with other people. In turn, the expectations from physicians and nurses (health professionals) included primarily occupational competencies. This comes as no surprise when the nature of such work is taken into account: it requires very good familiarity with the profession.

In the case of teaching professionals, besides the three basic competencies (occupational, self-organisational, and interpersonal) also other skills, not related directly to the teaching profession (e.g. knowledge of the public procurement law, and corporate management skills) were required. This proves that working in the teaching profession frequently requires diverse skills.

More often than in the case of other professionals, business and administration professionals were expected to have a good level of command of a foreign language. Also in this case, this results from the specific nature of work in such occupations, where language skills are frequently a basic tool. It must also be emphasised that in the jobs of legal, social and cultural professionals, employers fairly often required office competencies related to compliance to office procedures, writing of documents, and handling office equipment.

**Table II.11.**

**Competencies required by employers from candidates to work in professional jobs  
(in %, for combined sample 2010–2012)**

**Competency-related  
requirements  
for professionals**

	Science and engineering professionals	Health professionals	Teaching professionals	Business and administration professionals	Information and communications technology professionals	Legal, social and cultural professionals	Total
PER	36	54	61	61	30	54	50
SLF	59	37	56	50	44	27	46
OCCUP	32	61	27	38	31	45	42
COM	31	11	3	16	57	19	21
COG	17	5	2	18	25	11	13
LANG	6	0	11	26	7	21	11
AVL	4	11	6	8	7	6	8
QUAL	5	14	7	4	6	8	8
OTHER	4	5	28	2	2	13	7
OFF	8	0	2	8	0	20	5
TEC	5	8	0	0	4	3	4
ART	7	0	2	2	0	4	2
PHY	1	1	1	1	5	0	1
MNG	3	0	1	1	0	0	1
MAT	1	0	0	0	0	0	0
N	277	362	136	346	160	122	1403

*Notice: Competencies are denoted in the following way: PER – interpersonal, SLF – self-organisational, OCCUP – occupational, COM – computer, COG – cognitive, LANG – language, AVL – availability, QUAL – qualifications, OTHER – other competencies, OFF – office, TEC – technical, ART – artistic, PHY – physical, MNG – managerial, MAT – mathematical. For a detailed description of the competencies, turn to [Strzebońska, Dobrzyńska, 2011].*

Source: BKL: Employer Study 2010–2012.

Detailed competency requirements from candidates to specific professional positions are presented in Table II.12 (second level of competency codes) in a form of a ranking based on the popularity of the specific type of competencies advertised in job offers. Also in this case, due to their stability, the data presented concern the combined samples from 2011–2012, and do not differ from the relevant observations made during interviews with the employers.

With the stability of competency requirements proposed in the three rounds of the BKL Study in mind, it makes sense to list the competencies that were practically immaterial in recruitment to professional jobs. Employers least frequently expected that future employees will have mathematical, managerial, and physical competencies. What leaves room for surprise in this case is the weak interest in mathematical competencies which are of major significance in professional jobs (e.g. engineering). This, however, may result from the fact that such competencies were treated as an obvious requirement, which is why they were not spontaneously declared by the employers asked to mention the most important competencies useful for a specific job. This interpretation is substantiated by the fact that in job offers employers emphasised primarily the need of holding narrow occupation-related competencies. Managerial competencies were hardly ever mentioned, as the work of a professional does not require team management but rather the use of specialist knowledge, skills, and behaviours in cooperation with other people. If, however, requirements concerning managerial competencies were included, they concerned leadership skills, the ability to manage own time, and the making of decisions and communicating them to the group. The case with physical competencies, i.e. strength and physical fitness, which are an attribute of blue rather than white colour jobs, is similar.

**Professionals in  
the labour market.  
Requirements set up  
by employers**

**Table II.12.**

**The ranking of detailed competency requirements from candidates to professional positions  
advertised in job offers (in %, for a combined sample from 2011–2012)**

Item	Science and engineering professionals	Health professionals	Teaching professionals	Business and administration professionals	Information and communications technology professionals	Legal, social and cultural professionals
1	Occupational 44	Occupational 23	Occupational 13	Occupational 45	COM: building applications, web authoring 57	Occupational 47
2	COM: advanced computer skills 21	PER: communicativeness 13	SLF: showing initiative 13	PER: communicativeness 44	Occupational 56	SLF: time management 20
3	COM: basic computer skills 20	PER: cooperation in a group 10	PER: communicativeness 12	SLF: showing initiative 34	COM: advanced computer skills 55	SLF: independence 20
4	SLF: showing initiative 19	MNGR: leadership 10	MNGR: leadership 10	SLF: independence 28	PER: communicativeness 23	PER: communicativeness 20
5	PER: cooperation in a group 16	COM: basic computer skills 10	COM: basic computer skills 10	MNGR: leadership 25	PER: cooperation in a group 23	COM: basic computer skills 20
6	SLF: time management 14	SLF: time management 7	PER: cooperation in a group 9	SLF: time management 22	COG: analytical and synthetic thinking 18	PER: cooperation in a group 16
7	PER: communicativeness 14	SLF: independence 7	ART: knowledge of customs and conventions 8	COM: basic computer skills 22	SLF: showing initiative 14	SLF: showing initiative 15
8	SLF: independence 12	AVL: geographic mobility 6	SLF: time management 7	SLF: entrepreneurship 18	SLF: independence 13	MNGR: leadership 11
9	TECH: using imagination for technical purposes 12	COM: advanced computer skills 5	SLF: independence 6	PER: establishing and maintaining contacts 18	SLF: time management 11	ART: knowledge of customs and conventions 11
10	MNGR: leadership 11	ART: knowledge of customs and conventions 5	AVL: geographic mobility 6	COG: learning skills 15	LANG: command of foreign languages 11	COG: concentration 10
	N=1310	N=480	N=716	N=4336	N=1888	N=360

*Notice: Competencies are denoted in the following way: PER – interpersonal, SLF – self-organisational, OCCUP – occupational, COM – computer, COG – cognitive, LANG – language, AVL – availability, QUAL – qualifications, OTHER – other competencies, OFF – office, TEC – technical, ART – artistic, PHY – physical, MNG – managerial, MAT – mathematical. For a detailed description of the competencies, turn to [Strzebońska, Dobrzyńska, 2011]*

Source: BKL: Employer Study 2010–2012.

Following the discussion around the subject of the reform of higher education, concerning the implementation of the recommendations of the Bologna Strategy, and the “commissioned” fields of study, it is important to present a handful of conclusions acquired from the enquiries conducted as part of the BKL Study. They show how the labour market, perceived from the demand side represented by the employers, reacted and can react to such changes.

It goes without saying that expectations from candidates to professional jobs differed from those defined for other types of employees. Additionally, the group of professional job is internally varied, for which reason the requirements formed by the employers differ both depending on the jobs (groups of jobs) to which employees are sought, and the way in which such demand is publicised (i.e. the channel of recruitment). Employers demonstrated that they found the required level of education, experience, and competency profile of the candidates important.

Higher non-technical master degree significantly increases the opportunity for finding employment on a professional position on case of candidates participating in recruitment through job offers. An exception here are positions offered to science and engineering professionals, in whose case employers equally readily accepted higher technical and non-technical education of future employees. In other words, graduates of humanities are not without prospects in the labour market. Still, as the authors of the Chapter Four (Jelonek, Szklarczyk) of this publication prove, decisive for the competitive edge in the labour market is not as much the field of study as the type of the institution of higher education, and its prestige.

Data analysis proves that while being interviewed by the employer people competing for employment on a professional position may prove higher education (with engineer or bachelor degree), yet these are the candidates with a master degree who have greatest opportunities in the labour market. Worth noting, however, is that the rapid decline in acceptance of bachelor/engineer degrees in respondents to job offers which occurred only in 2012, with a parallel decrease of employee expectations concerning previous employment experience of the preferred candidates. Additionally, it may also be remarked that in turn expectations concerning previous employment experience grew in the case of the professional job groups towards whom requirements concerning education were abandoned in the process of selection. What did not change was the fact that recruiters required references confirming the professional experience declared by the candidates.

Such observations may point to the need of greater involvement of employers in campaigns helping to improve the system of higher education. The goal is to make higher education useful and furnish it with practical aspects, so that it could satisfy employer expectations. Such efforts are made, with a good example being the Biznes dla Edukacji (literally: business for education) project, <http://biznesdlaedukacji.parp.gov.pl/>, yet they have so far been insufficient.

From the point of view of competencies, employers required that professionals have actually the same competencies as were mentioned in the case of the remaining occupations: self-organisational, interpersonal, and occupational. Yet what increased significantly was the significance of the “narrow” occupational competencies that were strongly differentiated depending on the position for which the candidate competed. Considering therefore the introduction of the National Competency Framework (Polish: *Krajowe Ramy Kompetencji*) to the description of individual fields of study (or to be more precise: fine tuning the effects of education in courses dedicated to professionals), one should focus primarily on awarding the studies with a practical dimension and value. This will certainly make it easier for the graduates to enter the labour market properly, a process in which skills, knowledge, and foundations play the most important role. At the same time, teaching young people, one must not forget about furnishing them with certain general competencies ensuring independence, entrepreneurship, proper organisation of work, and providing interpersonal skills, including communicativeness, cooperation in a group, and problem-solving.

Closing, it makes sense to mention that the question of command of foreign languages among candidates to professional positions is significant especially at this stage of the job interview. In the process of recruitment conducted through job offers, every year this criterion of selection concerns approximately every other offer. Moreover, the applicant’s level of command of a foreign language is in most cases verified in the job interview.

## Chapter Three

*Konrad Turek*

# Ageing of the population as a challenge for economy, labour market, public policy, and citizens

## Introduction

In the nearest future, Poland will have to face the challenges and problems entailed by the process of population ageing, that is increasing life expectancy, dropping fertility rate, increasing average age of the society, and expanding proportion of the older generations. This will shake the foundations of the entire social and economic order and change our daily life. The “retirement bomb”, the breakdown of the welfare system, lack of candidates to work – are some of the slogans that the media use to define the black scenarios for the nearest future. The threat of destabilisation of labour markets and the system of social security favours activities aimed at a more extensive involvement of the older generations into professional activity, with an increased activity on non-occupational plane being also quite important and involving e.g. social, political, self-developmental, and pro-health activity. The system of healthcare, as well as solutions in the care of the older people are still not adjusted to the needs resulting from demographic changes. The largest threats are perceived in the area of social security. The number of working people, especially middle aged, who are the most important group from the point of view of tax revenue will decrease with a parallel increase in the number of people at retirement age. [Henkens, Schippers, 2012]. This will mean an increase of expenditure on pensions and a decrease of state treasury revenues. Without extending the period of economic activity, the state will not be able to guarantee the payment of pension benefits. Earlier retirement with the parallel delay of the entry of younger people into the labour market (e.g. due to longer education) reduce the average span of the working life. This is paired with the problem of competency demand and supply mismatch in the labour market, which – despite the lack of appropriate candidates – may result in structural unemployment, providing an additional burden on the social system. The diminishing (and ageing) supply of human resources available in the labour market will require that the employers make skilful use of the potential. In this chapter, we consider to what extent Poland is ready for the changes that will arise in the coming decades.

In the last century, the average life expectancy grew radically. For example, in the United States, people who lived to their 20th birthday<sup>41</sup> in 1910, died on average at the age of 64, and today they live nearly to 80. At the same time, the legal age of retirement in most countries either did not change or was lowered. Specific actions aimed at increasing it have been introduced only recently. Currently, such reforms have already been made or are planned in 28 out of 35 OECD countries, of which 13 are postponing the retirement age to 67, that is to the limit that in the nearest future should replace the level of 65 years being the standard in pension systems [OECD, 2012]. One of the proofs of how difficult the changes of this type are, are the street protests in Spain and France (despite the fact that the reforms in the latter concerned raising one of the lowest retirement ages from 60 to 62). Another example comes from Germany, besides Italy the demographically oldest European country, which only recently decided to shift the age of retirement up to 67 (a gradual process continuing to 2029). The earlier level of 65 was in operation since 1916. Moreover, the world's first system of retirement, introduced nowhere else but in Germany by Bismarck in 1889, defined the age of retirement at 70 (yet it was of absolutely different nature than the current). In Germany where plans are made to raise the retirement age even to 69, much like in Sweden, civic protests were smaller and the changes gained general acceptance. It is evident that people entering the labour market today may expect transition into retirement later than it is currently the case. It should not come as a surprise that a system designed over 120 years ago for an entirely different social structure requires adjustment to today's conditions.

In the last two decades, the question of raising retirement age in Poland was usually pushed to a more distant plane as the subject is risky for politicians, and causes resistance and resentment of the electorate. The question of extending the period of economic activity received similar treatment. A young country, which Poland of the 1990s was both from the point of view of the development of democratic institutions and its demographic structure, faced plenty of burning problems and major everyday challenges in the period of transition.<sup>42</sup> The successive governments had to cope among others with building the foundations of free market economy and structures of a democratic state, profound system reforms, privatisation, inflation to be curbed, and unemployment to be combatted. Until Poland's accession to the European Union in 2004, the only – although extremely significant – answer to demographic challenges was the reform of the pension system initiated in 1999. Dominant, however, was the policy of pushing the older workers out of the labour market, among others, through an exceedingly developed system of early retirement and pre-retirement benefits paired with lack of incentives to continue employment as long as possible (early labour market exit was treated as an instrument for reducing problems in the labour market).

Situation in the labour market in the 1990s and early in the 21st-century did not encourage the employers to excessive care for the older and ageing staff. Extensive access to young candidates from the generation of the baby boom generation of the 1980s, much better educated than the generation of their parents, satisfied the needs of employers to a great extent. The pension system – giving vast numbers of Poles an opportunity of early transition into retirement – favoured earlier labour market exit and released companies from developing age management and supporting for the ageing personnel.

A significant step (although in fact, it was a postponed element of the 1999 reform) was the liquidation of earlier retirement schemes and their replacement with bridging pensions in 2008–2009: in result, more than three quarters of the previously privileged people lost the option of earlier retirement. The successive step was the establishment of gradual increase of the eligible age of retirement to 67, both for men and women, in 2012. Let us add that today Poland belongs to the minority of EU states where the retirement age of women and men is different.

This chapter analyses the processes related to demographic changes, and presents the basic challenges that most Western countries, Poland included, will face. At the outset, we must clearly emphasise that the question of ageing people is a problem not only in the 50+ generation. A category used generally in literature to define the "older people" in reference to the labour market is the very category from 50 to the

<sup>41</sup> Mortality at infancy and childhood, which dropped strongly in the last century, has vast impact on life expectancy at birth, which is why the index of life expectancy at 20 is more credible for comparison's sake.

<sup>42</sup> Throughout the Central Europe, the processes of profound demographic changes intensified only with the start of the system transition. Drastic decrease in fertility rate, gradual extension of life expectancy, and the emigration of the young were the factors additionally "ageing" the age structure. The process was of far more intense character than in the case of Western Europe.

eligible retirement age. It corresponds with the main public policy programmes, e.g. Poland's Solidarity of Generations (*Solidarność Pokoleń*). One must not forget, however, that it is an extremely varied collection of individuals, and the limits of old age are not defined only and solely by the calendar. More importantly, the ageing of the population is a process that concerns pre-retirement and younger generations to the same degree. First, because the changes of the social and economic reality will influence their life and work to the same degree. Secondly, the situation during the heaviest demographic burdens in a few decades will hinge on the way how they are going to age. This is why an analysis of demographic changes requires a dynamic perspective, covering the differences between individual age cohorts (e.g. the differences in human capital, mentality, experience, and preferred employment and education) as well as a gradual change of the age structure of the society.

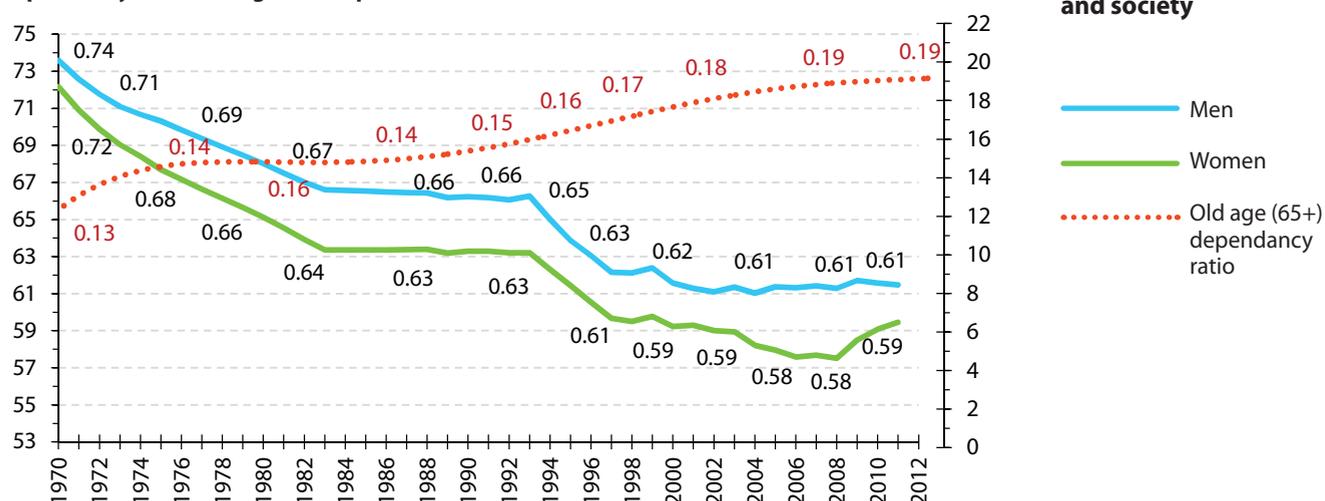
In the further part of the chapter, we embark on the questions that concern the significance of the process of demographic changes for economy and society, including the human capital resources, labour market, businesses, training institutions, public policy, and also the employees. Further, we present the development of policy concerning the older generations in the process of ageing of the Polish population. The successive two sections are based mostly on the data from the BKL population study from 2012. They concern the situation in the market, and also the education and competencies of the all the people and younger generations. The last part examines the role of the age and the process of employee ageing from the point of view of the employer, drawing mostly on the employer studies conducted as part of the BKL.

## **1. The impact of demographic changes on economy and society**

Since at least 1970s, the effective retirement age in Poland was continually falling (Chart III.1). The significant drop in the early 1990s was related to the systemic change and liquidation of the so-called hidden unemployment also in the older generations, who opted for retirement in the reality of the free market. From that time, the average age of transition into retirement among men has remained at the level of slightly over 61. In turn, among women, the rate continued to drop after 1989 – to less than 58 around 2008. Only the last years have brought a sudden increase, visible especially among women, which is caused primarily by the limitation of early retirement options.

**Chart III.1.**

**The average effective age of transition into retirement (the left axis – age)\* and the old-age (65+) dependency ratio (the right axis – per cent)\*\* in Poland in 1970–2012**



**The impact of demographic changes on economy and society**

— Men  
 — Women  
 ..... Old age (65+) dependency ratio

\* Average effective age of retirement: the data present the weighted five-year mean (e.g. the data for 1970 are the average for 1965–1970, and for 2000 – the average from 1995–2000). Based on the data for 1965–2011. The data from before 1990 can be loaded with an error, as they were derived from censuses. The data from 1991–2011 come from labour market studies. Source: OECD.

\*\* Old age (65+) dependency ratio denotes the ratio of people aged 65 and over to people aged from 15 to 64. The line of adjustment to specific data for the years: 1970, 1975, 1980, 1985, 1990–2012. Source: Eurostat.

Numerical values are quoted only for selected years.

Source: OECD, Eurostat.

In parallel, we may observe changes of the age structure, as illustrated in Chart III.1 with the old age dependency ratio, that is the ratio of people aged 65 and over to the people aged from 15 to 64.<sup>43</sup> In 1980s, it amounted to approximately 15%, and has begun to grow faster since the 1990s, to reach 18% in 2005, and 19.4% in 2012. Significantly, the demographic forecasts envisage that the process will speed up. In 2020 the ratio will already be at 27%, and 43% of Poles will be over 50 by 2050, Poland will have lost 4 million citizens, and the old age dependency ratio will grow to 53%, making Poland one of the oldest countries in Europe, with every third citizen aged 65+ (data from Eurostat, GUS).

Similar changes continue and will take place in most developed countries of the world. In the coming decades, the ageing of the population will certainly change the face of Europe and intensify the processes whose consequences are difficult to envisage today, e.g. the inflow of immigrants from outside Europe and changes of the ethnic structure of the states. Consequences of demographic changes are already experienced by many countries that are today relatively older than Poland. These processes will not remain insignificant for the social and economic reality of Poland. Let's take a brief look at the greatest challenges of ageing societies which we will have to face in the nearest future, and the portrait of the labour market of tomorrow.

It is evident that the supply of human resources will diminish. Already by 2020, Poland will have lost approximately 1.2 million people aged from 15 to 64, and in 2030 the corresponding number will be lower by 10% (i.e. by 2.8 million) from the current level, while the available human resources will have shrunk by nearly a third (7.5 million) by 2050. Already at this day, there are many countries that face the problem of shortage of employees. For example, despite the lowest unemployment rate continuing for over a decade and oscillating around 6–7%, Germany has a pessimist outlook into the situation in its labour market. An increasing problem is the finding of employees for professional jobs, especially in the engineering, high-technology, ICT, processing, services and healthcare sectors. The largest European economy will have

<sup>43</sup> It must be remembered that the old age (65+) dependency ratio portrays only the ratio between specific age categories. People past the working age do not have to be altogether unproductive.

lost 2 million specialists by 2020, and by 2050 the available human resources will have shrunk by a third [Constant, Tien, 2011; NYT, 2011]. The situation in the Scandinavian countries, leading in policy focused on the problems of the ageing population, is not dissimilar: also there problems related to the shortage of employees are envisaged [Kunz, 2007].

In the coming decades, the European labour market will increasingly belong to the employees, and national economies will be looking ever more eagerly for human resources from abroad. Although many countries face other burning problems at the time of today's economic crisis, the subject of immigration for profit and the so-called brain drain may return to the first pages of newspapers. Already today, our Western neighbours believe that an immigration policy encouraging, among others, Poles to work in their country can be a remedy against problems with staff shortages. This policy may be favoured by high unemployment among young people in many European states, Poland included.

Parallel to the decrease in the number of staff, their average age will rise. For the employees, this will mean changes of career paths, especially in the sectors with strongly rooted principle of seniority in paths of promotion. [Henkens, Schippers, 2012]. Increasingly often, the older will work under younger bosses, which may lead to additional conflicts. Entering retirement age will not automatically mean the end of the career, one of the reasons being the low level of financial replacement of salaries with old age benefits. There will also be a significant rise in flexible forms of employment at later stages of the professional career. Even now there are cases of treating self-employment as a kind of bridge between the professional career and retirement [Anxo, Ericson, Jolivet, 2012]. Employers will have to learn to manage the limited and older supply of human resources. So far, one of the solutions was the socially acceptable strategy of reducing employment by sending older employees to early retirement, which still persists in the Polish reality [see: Perek-Białas, Turek, 2012]. Currently increasing is the role of age management, i.e. such an approach to the management of personnel in organisation that accounts for the age, the ageing process, and life-cycle of the individuals, to create a working environment favouring staff at all ages, and making it possible to use their potential and satisfy their needs. Age management means not only practices addressed directly to the older people, but also sustainable approach aimed at improving the capacity of various age groups to work. For the employer, this also means an investment into the company's human resources, which may allow increasing motivation and loyalty, better use of the available competencies and skilled resources, and in result – increase the team's stability and productivity. Similarly, the solutions making it possible to combine work with care related duties will play a greater role, and so will, as the experts jointly envisage, lifelong learning, and updating and continuous improvement of employee competencies.

Another area of significant changes will be the structure of the economy. Experts foresee that the ageing population will influence the services sector, and decrease the role of the industrial sector, as – compared to younger generations – the older people have smaller consumption of various devices and greater demand for a range of services. These include, among others, health, rehabilitation, and care services, cleaning and helping, financial services (e.g. savings), public transport services, ensuring safety and security, and entertainment and leisure. From the point of view of national economies, especially the smaller ones, this may have a positive impact, as industrial production is frequently globalised and services are provided by local resources. [see: Kunz, 2011]. Also developing will be the sector of silver economy focused on the provision of goods and services to the older population. This consumer category will be larger, increasingly healthy, and will live ever longer and – importantly – it will also be wealthier than the predecessors.

Healthcare system and also solutions in the care for the older people are still not adjusted to the needs resulting from demographic changes. Let's, however, pay attention to the fact that they have never so far been forced to provide services for such a large number of people in highly advanced age. An increasing number of people will live to an old age. In 2000, there were under 750,000 people of and over 80 in Poland, and their number will have doubled by 2015 to reach over 2,000,000 by 2030. Expenditure on human health and social work depends not only on the count in the oldest age groups, but also on their health condition. The life expectancy of Poles is systematically increasing, yet the healthy life expectancy does not follow such an optimistic course. Today's 50-year-olds are statistically facing another 27 years of life in the case of men and 32 years in the case of women [Eurostat 2011]. Yet only a half of that period will be lived in health (as suggested by the healthy life expectancy that for people of 50 amounts to 15 and 17

years, respectively). An improvement of the quality of life of the older people and the healthy ageing of the younger generations will certainly have a positive impact on the costs incurred by the healthcare system. Not insignificant, however, is also its effectiveness and the broader economic and social contexts, as some analyses (e.g. from Finland) show that the ageing of population does not automatically lead to a general increase in social and health expenditure, as expenditure related to children and youth drops. [Kunz, 2011].

A large problem with care services is currently present e.g. in Germany. By 2030, the country will have witnessed an additional demand for 1 million people in the human health and social work sector to deal with the older people. Of greater significance in this scope in Poland is the aid offered by the family: the main provider of care services today. This potential will, nevertheless, be dropping also due to the smaller number of children, migrations, and loosening of the traditional family ties, which will have a direct impact on the demand for an external system of care and decreasing the phenomenon of double burden: with work and care duties [Stypińska, Perek-Białas, 2011].

The impact of demographic changes on policy is another interesting question. The two decades of Polish democracy have shown that those most eager to participate in elections are the 40+, 50+, and 60+ [Cześniak, 2009]. This, however, does not mean that such a factor is of key importance and unchanging. With the change of age structure also the structure of education changes, which has a fairly significant impact on turnout at elections and preferred political options. There is also the generational change, so that the generation of the baby boom of the 1980s, who were educated and brought up in free and democratic Poland will now be ageing. This group of electorate will certainly not avoid being targeted by the political parties.

Besides professional activity, also the involvement of the older generations in voluntary service will change. The non-profit sector provides promising prospects for the older people: both the inactive and the still economically active. It is a reality that is clearly different from the reality of profit work. For example, it gives a high flexibility of involvement and makes it possible to adjust the type and time of work to your potential. Moreover, it offers good conditions of work, especially as far as the atmosphere and possibility of aligning work and private duties (in this: care duties) are concerned. Furthermore, other volunteers and staff can provide support at difficult times and ensure company in everyday life. This can save from alienation, loneliness, depression, and exclusion. Voluntary services award with a notable sense of responsibility and being needed, improve self-assessment, and give an opportunity to decide about the actions and development of an organisation, and offer autonomy and freedom. Work not for profit also means a possibility of updating and improving your skills [Turek, 2011].

Closing, we emphasise what is most important from the individual's point of view, namely the quality of life. The impact of the extension of the average life span and the ageing of population on the quality of life is not absolutely decided. It is so as this depends not only on economic and social changes, or on the operation of the retirement and/or healthcare systems. To a great extent this depends on us ourselves, on how we are going to age (already now), and how healthy and active we will be at an older age. For this reason, the concept of active ageing is treated as a certain investment, bringing returns already at individual and social levels.

The processes described above may provide the most probable direction of social and economic changes, nevertheless they take a certain important factor – relative economic and political stability – for granted. In the case of the growing burden on certain demographic groups accompanied by strong economic turmoil, a significant deterioration of the situation in the labour market, and failure to impose the necessary reforms at an appropriate time, instead of a social and economic evolution, we may live into a profound crisis. It would be the more difficult to combat as its reasons would lie in the demographic processes, which cannot be controlled in a short period. We shall, however, not follow such a pessimistic scenario any longer. Instead, we will take a look at how Poland was getting ready to meet the challenges of old age in the last two decades, and to what degree we are today ready for the changes that have to occur.

## 2. Public policy development in the face of the phenomenon of population ageing in Poland

While Poland was moving on the long path from a communist country to a member of a modern democratic Europe, striving with the problems of system transition, the demographic changes (taking place at a further plane) hardly ever attracted interest of political decision makers. The ageing policy in Poland, that is the policy facing the challenges posed by the ageing population, can be divided into four main periods [see: Ruzik, Perek-Białas, Turek, 2013].

The first of them lasted from 1989 to 1999, and covered the system transition and main systemic reforms. It was a period of turmoil when the attention of successive governments was mostly on the basic and current problems of building and stabilising the young democracy, free market economy, privatisation, unemployment, inflation, constitution, and the fundamental social reforms. The lowering age of transition into retirement, additionally favoured by the options of early retirement and their substitutes in the form of old age pensions and pre-retirement benefits, was treated as a process favouring conflict-free solution of the problem of growing unemployment. The Polish society was relatively young compared to other countries of Europe. The only challenge that finally witnessed a broad political involvement was the question of the growing burden on the pension system, and the need of its reform. In the perspective of the following 20 or 30 years, the generation of the post-war baby boom was to retire.

Innovative and daring at the scale of the region, the reform was introduced in 1999. The new system offered stronger incentives to extend the period of activity in the labour market, combining it with the value of the pension. Many planned changes, e.g. the limitation of retirement privileges, were, however, postponed in time. Without doubt, the pension system reform was the main and exceedingly important achievement in the “aging” policy at the time, if not in the last 20 years. Nevertheless, in the 1990s, the policy was focused mostly on pushing the older workers out of the labour market, and also on support in the matters of human health and social work [Szatur-Jaworska, 2000; Chłoń-Domińczak, 2009; Góra, 2008].

The years 2000–2003 can be defined as the period of preparation to EU accession and problems in the labour market. At this time, the ageing policy already gained a significant status in EU strategic documents. The goals of the Lisbon Strategy [2000], one of the basic acts of the Community, include an increase in employment rates for older generations. This, however, found no leverage into policy in Poland. [Błądowski, 2002]. The few initiatives (e.g. Hausner plan) tackling the subject found no reflection in complex strategies [Perek-Białas, Ruzik 2004]. Yet that phase was the time of a deteriorating economic situation: unemployment was on the rise, reaching the record value of 20%, and the generation of the baby boom of the 1970s and 1980s was entering the labour market, additionally and significantly reducing the average age of human resources, as compared to Western countries. Early retirement was still treated as a remedy against the high unemployment among the young, and retirement as such was glorified as a period of the well-deserved respite.

The political situation changed profoundly in 2004–2008, that is in the first years following the accession to the EU. The situation in the labour market improved, with the unemployment in the period falling by a half (from the level of approximately 20% in 2004 to below 10% in 2008) and the open borders favoured emigration for profit. As a new EU member state, Poland had to adjust its political strategy to EU objectives and priorities. This concerned also the subject of active ageing and increasing the activity of the older population. The result was the development of a complex programme Solidarity between generations – actions for increasing the labour market activity of people 50+ (*Solidarność pokoleń – Działania dla zwiększenia aktywności zawodowej osób w wieku 50+*) in 2008, which was accompanied by studies, analyses, discussions, and a greater public interest than before. The programme was an answer to the challenges of the ageing population, focusing on increasing the economic activity of the older people by 2020. Although the programme was promising, the first years of its implication are difficult to evaluate, the more so as the economy slowed down, and political priorities shifted. The first years after the accession to the EU can be summed up as the period of building an ageing policy, whose nature can be defined only as a façade.

It is so as it was motivated by the need to respond to EU priorities and had no leverage into meaningful actions.

## **Situation of the elderly and younger generations in the market**

From 2009 to the present, i.e. 2012, we are observing a change in the political discourse concerning the question of the older people. The demographic changes can no longer be marginalised. The façade policy is slowly making space for actual changes. The first step was the reduction of retirement privileges planned already in the reform of 1999. For years, the question was postponed and treated as a highly sensitive subject – nobody was ready to infuriate the electorate by introducing unpopular changes. In 2009, most of the earlier retirement options were liquidated. Approximately 900,000 people, representing 300 professions, lost their privileges, which were replaced by a temporary bridging pensions scheme based on the risk present at work, and not (as previously) on a list of professions. Approximately 270,000 people in 60 professions working in special conditions gained the right to bridging pensions. Yet the protests of trade unions led to the approval of retirement privileges e.g. for all miners and teachers. The second step was the parliamentary authorisation of the gradual shifting of the eligible retirement age to 67, both for women and men. The process is to continue systematically: by one month every quarter. This means that the level of 67 years will have been achieved for men by 2020, and for women – by 2040. Even this change was a very daring decision in the context of the previous two decades, as it was strongly criticised by the opposition and trade unions, but supported by the majority of experts and employer organisations. It seems that the recent years have brought change in the perception of the old age. In the process of ageing, this was favoured also by the recognition of the year 2012 as the European Year for Active Ageing and Solidarity between Generations.<sup>44</sup>

### **3. Situation of the older and younger generations in the market**

In the context of the considerations made above, let's take a closer look at the current situation of the older people in the labour market in Poland, and also the broader process of population ageing and generational changes.

The basic dimension is the situation of the older people in the labour market. According to BKL data, in 2011, the employment rate of men aged 50–64 was 49%, compared to the EU average at the level of 65%. For women aged 50–59, it was 48%, with the EU–27 average being 63% (Table III.1; EU data: Eurostat 2011).<sup>45</sup> The last three years brought a visible increase in the employment rate in the five-year pre-retirement groups: from 26% to 30% among men aged 60–64, and from 30% to 41% among women aged 55–59. This is entailed among others by the liquidation of a major part of retirement privileges, which delayed the average age of transition into retirement.

<sup>44</sup> The verbatim translation of the Polish term is "The European Year of the Activity of the Elderly and Intergenerational Solidarity".

<sup>45</sup> It should be added that the unemployment rates quoted by the Polish Central Statistical Office (GUS), and based on the results of the BAEL Study, differ slightly from the results obtained in the BKL Study. For example, the BAEL Study for the second quarter of 2011 (i.e. a period comparable to the second round of the BKL Study presented in Table III.1) had the following employment indicators: for men aged 20–24 – 50%, 25–34 – 85%, 35–49 – 85%, and 50–64 – 57%; for the women aged 20–24 – 36%, 25–34 – 67%, 35–49 – 76%, and aged 50–64 – 53%. Generally, the BKL Study shows lower indicators. This results from differences in the questionnaire that translate among others into minor differences in the way of classifying the labour market situation of people. The questions are available from the <http://bkl.parp.gov.pl/> website.

**Table III.1.**

**Employment rate in Poland in 2010–2012 and in the European Union (2011) in population aged from 20 to 59/64, broken down by sex and age categories**

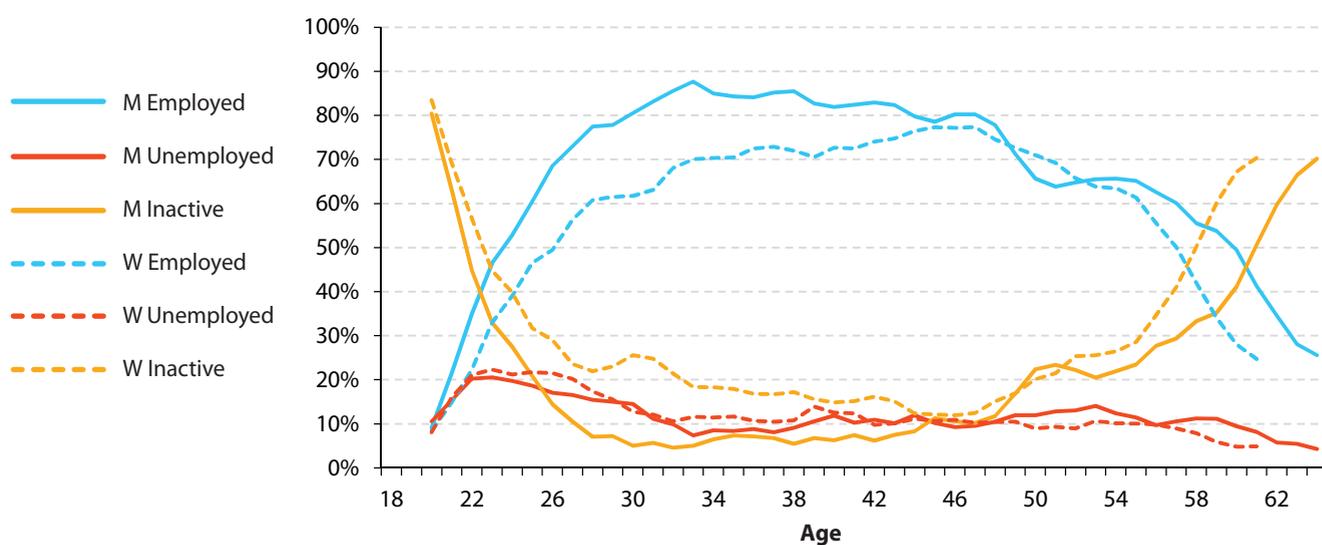
Age	Poland						UE-27	
	2010		2011		2012		2011	
	M	W	M	W	M	W	M	W
20–24	48	38	42	30	43	30	53	46
25–34	82	66	84	65	81	63	81	69
35–49	81	74	81	75	80	74	86	74
50–59/64	49	46	49	48	50	51	65	63
50–54	66	63	66	64	65	65	82	70
55–59	54	30	52	39	57	41	70	55
60–64	26	-	29	-	30	-	39	-
Total	67	59	66	59	66	59	87	74

Source: BKL – Population Study 2010–2012 (for Poland), Eurostat 2011 (for UE-27).

The following chart (III.2) presents the labour market situation of all generations, broken down by sex. We see that the situation of women and men becomes equal only in the age category 45–55. In the remaining cohorts, there are clear differences in the proportion of the employed and inactive populations (with the percentage of the unemployed remaining at similar levels). A greater proportion of the inactive among women in young and middle age results to a great extent from maternity and care duties.<sup>46</sup>

**Chart III.2.**

**Age vs. labour market situation (as defined by BAEL) of women and men in 2012 (moving average from 3 years)**



M – Men, W – Women.

Source: BKL – Population Study 2012.

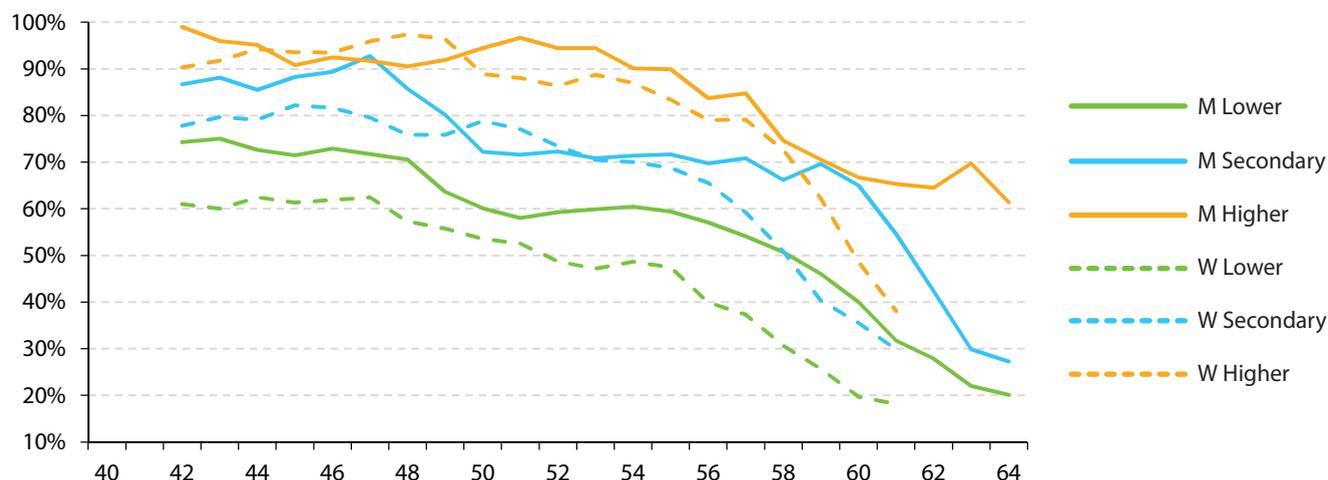
<sup>46</sup> Speaking of barriers in entering employment, the unemployed and inactive women pointed to care and home duties more often than men. These predominantly included childcare becoming a particular obstacle in entering employment (or the reason not to start work) for 78% of women aged 25–39.

From the age of 40+ we observe a more rapid dip in employment ratios, with a significant disproportion visible between women and men in the group of 50+, which results from the differences in the eligible age of retirement.

These tendencies are portrayed even better in Chart III.3, which additionally accounts for the level of education. In the case of both sexes, the largest drop occurs in the last five-year pre-retirement period.

**Chart III.3.**

**Employment rate among population aged 40–59/64, broken down by sex and level of education (moving average from 3 years)**



M – Men, W – Women.

Source: BKL – Population Study 2012.

Clearly visible in this breakdown is the significance of the level of education for the situation in the market. The differences between individual types of education are significant and similar for both sexes: a high level of education denotes a greater probability of having employment, and leaving the labour market later. It must be remembered, however, that the division into educational categories conceals among others the position, type of job performed, and salaries which are a far more significant factor for the position in the market at an older age and for the decision to discontinue economic activity.

**3.1. Barriers rendering employment difficult**

As presented above, the percentage of the unemployed does not grow with age, however, the proportion of the inactive does (more or less from the age of 45). Analysing barriers in finding employment by the unemployed and inactive, we can use the results presented in charts III.4 and III.5. Using principal component analysis, four groups of barriers, gathering together difficulties of similar nature, have been determined:<sup>47</sup>

1. competency barriers: level of education; insufficient experience, lack of certificates and permits
2. external factors: lack of job offers in the vicinity; lack of contacts and friends; unfavourable commuting arrangements

<sup>47</sup> A model developed for 11 ordering variables, being answers to the question “Does ... make it hard for you to get employed?: 0 – No; 1 – To a small extent; 2 – To a moderate extent; 3 – To a high extent”. The four distinctive components explained 65% of variance. KMO measure = 0.673. Removed from the analysis were the following three barriers: sex, running a farm, and education or additional training. They were not well represented in the model (because of the small count of positive answers), nor did they fit the model’s concept.

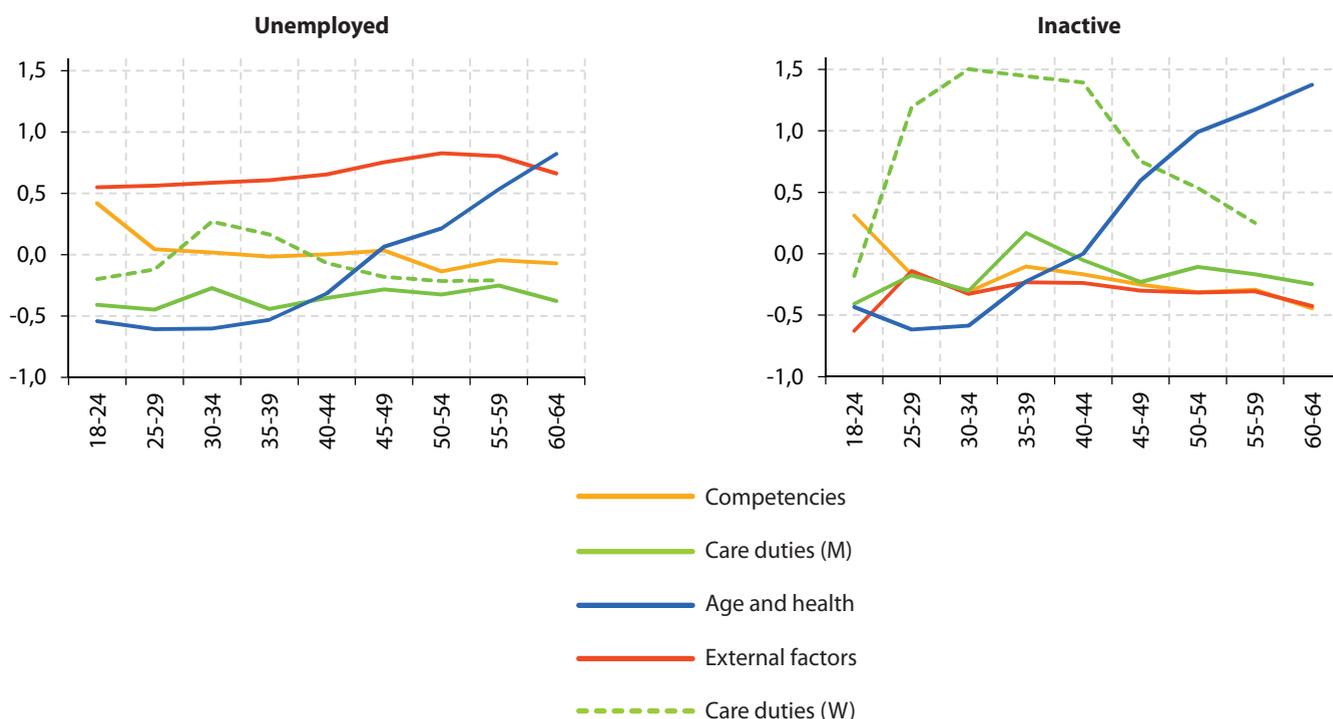
**Ageing of the population as a challenge for economy, labour market, politics, and citizens**

3. care duties: childcare; care for another member of the family; homemaking
4. age and health condition.

There were visible differences between the unemployed and the inactive. The first pointed primarily to the importance of external barriers, independent of them. In the case of the latter group, at least in the case of women, the care duties were of dominant importance. Both among the unemployed and the inactive, there is a clear increase of limitations related to age and health condition in successive age groups. Chart III.6 presents this data in greater detail.

**Charts III.4, III.5.**

**Significance of various types of barriers in finding employment by the unemployed (left) and inactive (right)**



M – Men; W – Women.

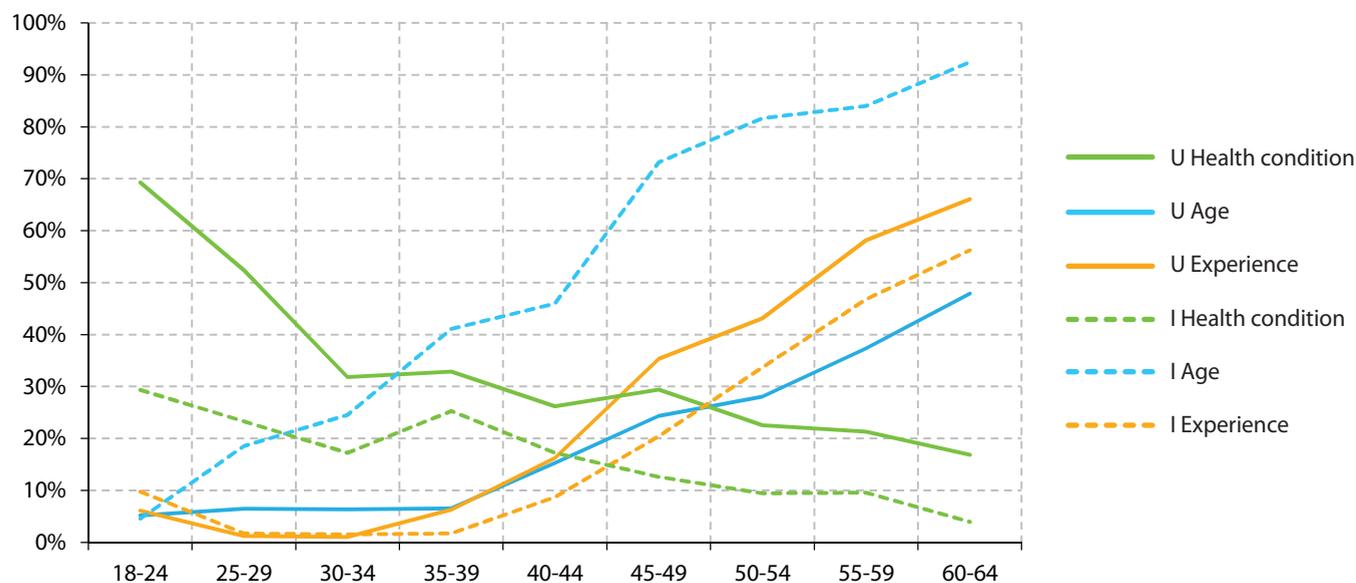
Mean values of the components for age groups acquired through principal component analysis. Zero value is set as the average value of the given factor for all the respondents.

Source: BKL – Population Study 2012.

**Chart III.6.**

**Selected barriers in entering employment by the unemployed (U) and inactive (I) due to: health, age, and insufficient experience (in %)**

**Barriers rendering employment difficult**



*U – unemployed; I – inactive.*

Source: BKL – Population Study 2012.

Age has already been pointed to as a significant barrier in entering employment by the older unemployed and older inactive. Although infrequently listed by younger people, the percentage of its indications grew rapidly already for the generation of 40+. Among the unemployed aged 50–59/64 it was as high as 52%. Among the inactive, it was not much lower: 46%.

What may be indicated as one of the main reasons for such a status quo is the legally guaranteed period of protection for the employers, covering four years before the eligible age of retirement, when an employee cannot be dismissed. As far as this aims for the protection of the older staff, it provides a significant barrier in finding employment for the older unemployed, as employing such a person the new employer in a way agrees to have their hands bound, as there is no scope for manoeuvre left should the new employee fail to meet the expectations.

Much like the age, the health condition was a problem mostly for the oldest group of the unemployed. Among the economically inactive, it was definitely the dominant barrier. Complaining on it were 34% of the unemployed and no fewer than 86% of the inactive population in the age category of 50–59/64.<sup>48</sup> Chart III.6 does not present the differences between the populations of inactive men and women, and it is worth mentioning that these are the inactive men who indicated health limitations much more frequently.

An opposite tendency is visible in the case of insufficient experience, which was the only one to drop systematically with age. The question of experience of the older workers and of its significance will return later in the document.

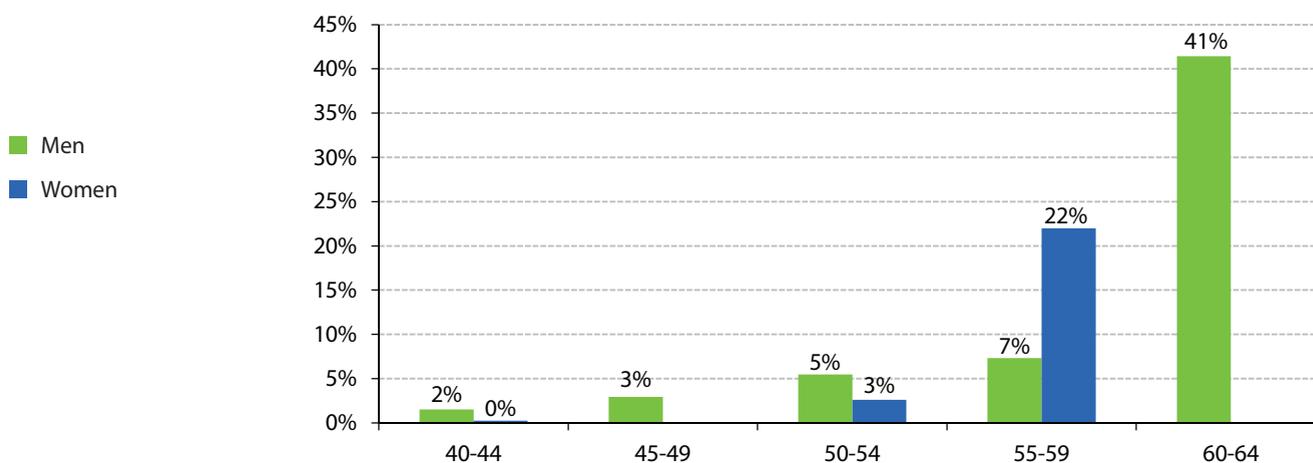
<sup>48</sup> This is in line with the subjective assessment of the condition of health, which also systematically dropped with the process of ageing. As far as nine out of ten people in the 20+ and 30+ groups assess their health condition as good, it is only every other person in the 50+ group. An even greater plunge in the subjective health assessment was present among the inactive. In the age group from 35 to 49, no fewer than 54% believe their health to be good, while in the group 50–59/64, the corresponding share is only 27%.

### 3.2. Earlier retirement

In 2012, men in early retirement were present already in the group 40+ (Chart III.7), which resulted from retirement privileges of certain occupational groups. Yet both in the case of women and men, it was only the pre-employment group, where a larger share of the retired was present: 22% of women aged 55–59 and 41% of men aged 60–64.

**Chart III.7.**

**Proportion of people in retirement, broken down into sex and age categories**



Source: BKL – Population Study 2012.

Of people in early retirement, 45% had basic vocational education, and 31% – secondary. In the case of men, these were most often employees who earlier worked as skilled workers (32%), and operators and assemblers (32%). In turn, in the case of women, they were skilled workers (16%), professionals (16%; mostly teachers), and elementary workers (14%). This subject was already analysed in the second section of Chapter One of this publication. Overrepresentation of worker and operator jobs is connected with retirement privileges. Quite recently, many people from these occupational groups could move into earlier retirement. In 2008–2009, the scope of retirement privileges was strongly limited by the introduction of bridging pensions schemes, yet still, representatives of a few score jobs (working in special conditions or performing work of special character) retain the right to retirement benefits before reaching retirement age.

It is worth adding that among people in early retirement, 9% of men and 3% of women at working age are still working. Every third of them works in service jobs, yet the low counts of the employed retired in the studies of 2012 (n=56) render any more precise analysis impossible.

### 3.3. Running an enterprise as an alternative to paid employment

An alternative for paid employment is running own business. From the point of view of the state, in an ageing society this is an especially significant type of activity. First, because it creates new jobs. Secondly, because it extends economic activity: statistics from many countries, Poland included, demonstrate that people running their own businesses move into retirement later [Anxo, Ericson, Jolivet, 2012]. As a rule, entrepreneurship and development of new businesses are associated with the younger generations of the recent graduates with innovative ideas. Yet it is noticed that ever more often the older have at their disposal profound life and professional experience, which can be leveraged into the competitive edge of their potential business.

In Poland, company owners are usually middle-aged people, from approximately 35 upwards. Among the economically active aged 50–59/64, no fewer than 11% ran their non-agricultural business in 2012, while

the fact that 9% ran agricultural businesses is worth mentioning too. These were usually men, as women ran only every third enterprise in any age group. Moreover, in all age groups, such an activity was more popular among people with higher education: among the higher education graduates aged 50–59/64 active in the labour market, as many as 21% ran their own businesses. More about the circumstances and conditions of running own business can be found in the BKL Study report from 2012, entitled *Wykształcenie, praca, przedsiębiorczość Polaków* [Czarnik, Turek, 2012].

### 3.4. Voluntary service as an alternative for profit work

Another field of activity in the old age can be the non-governmental sector. The BKL Study from 2012 showed that only 2% of Poles aged 18–59/64 admitted to volunteering in the previous 12 months. Among the 50+, the share was only 1%. Identical results were obtained in the previous rounds. Other studies provide a slightly more optimistic picture of involvement in voluntary services (which also results from different phrasing of the questions, and the construction of the entire questionnaire). For example, the data from regular studies conducted by Klon/Jawor show that approximately 17% of people aged 46–55 and 10% of those aged 55+ worked in voluntary organisations (including religious ones) [Przewłocka, 2011]. Similarly, according to the Eurobarometer (2011), the above was true for 12% of people 55+. In turn, according to the SHARE data for 2006–2007, only 2% of people aged 50+, were volunteers.

These differences, however, do not change the fact that Polish senior citizens become involved in voluntary services far less often than their counterparts in majority of European states. The reasons for such a status quo may be partially found in history, tradition, and the culture of the old age. In Poland, it was to a great extent shaped by the socialist system, which distorted the significance of civil activism [Turek, 2011]. The image of the old age is still far removed from activity and lacks space for voluntary service. Another reason is the limited potential for participation. In Poland, the third sector began developing its focus on the activation of senior citizens only in the last decade. Although some organisations that aimed at the activation of these citizens have existed for a longer time, yet only in the recent years the potential given by the third sector to the generation 50+ was begun to be perceived. Earlier, the NGOs perceived seniors as beneficiaries of assistance rather than providers of support. The situation is changing with the development and professionalisation of the third sector supported with EU funds, and partially modelled by EU priorities as well. Significant here was the European Year of Volunteering (2011) and the European Year for Active Ageing and Solidarity between Generations (2012). Slowly, also the attitudes of the older people are changing, and the generations with an entirely different experience (including the image of volunteering) will be entering old age. It must be emphasised that the role of the non-governmental sector in Poland in the promotion of the idea of active ageing in the last decade cannot be overestimated. While state policy focused on the economic aspects (the so-called productive ageing), the NGOs dealt with an extensive range of activation and maintaining the activity of older people [Ruzik, Perek-Białas, Turek, 2013].

## 4. Competencies and education

Lingering among the employers is the unfortunate conviction that older employees are worse, endowed with poorer competencies, less efficient, more poorly prepared to work, and moreover finding it more difficult to adjust to new solutions and to learn new technologies. This is corroborated by the ASPA studies from 2009 [see: Turek, Perek-Białas, 2010]. Irrespective of how mistaken such a conviction is, and to what extent it is supported with experience of specific employers, the prevalence of such an opinion may have detrimental impact on both the parties to the job contract. Lack of interest in development and labour conditions of older staff, and the pressure on the earliest possible shift into retirement may have a negative impact on efficiency and commitment to work, cause reluctance to continue labour market activity, and speed up the decision about transition into retirement. For the employers, lack of engagement and low productivity of employees means potential costs and losses. A change in the nature of this relationship may bring just the opposite results. Active support of employees, development of conditions of work corresponding to the needs and potential at the given stage of life, assistance in updating and developing

competencies, and also helping to use them may increase the motivation to work, satisfaction, and productivity. In a longer spell of time, this can have a positive impact on the stabilisation of employment and development.

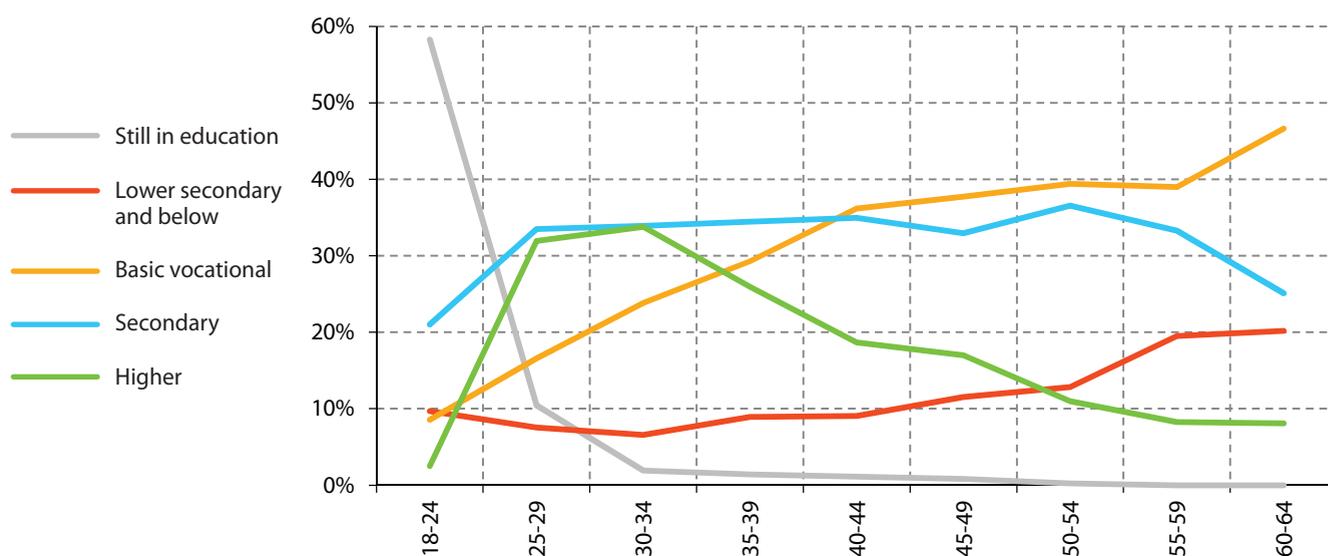
#### 4.1. Education

One of the fundamental factors determining opportunity in the labour market is the level of formal education. This is a dimension in whose case we see the largest divergences between the successive generations of Poles. Those who received their formal education in the 1960s, 1970s, and 1980s had entirely different circumstances, opportunities, and also aspirations than the young people of the 1990s and the turn of the century. From the beginning of the system transition, we perceive a constant growth of interest in higher education in Poland. While in 1990 HE institutions provided education to 404,000 students, in the first decade of the 21st century, there were nearly 2,000,000 students each year. This was accompanied by an increase of the number of non-public HE institutions, which additionally rendered access to higher education easier (in 2010, they provided education for 33% of students [GUS, 2011]).

The oldest generations did not have such a vast potential for studying, and the reality of the People's (i.e. socialist) Republic of Poland did not necessarily prefer such a type of education. In turn, at that time, vocational education and training – marginalised in today's system – was a far more accessible, available, and prospective form of education. The impact is visible in the educational profile of individual cohorts.<sup>49</sup>

**Chart III.8.**

**Education of Poles, broken down by age, accounting for the number of people in education (in %)**



Source: BKL – Population Study 2012.

The level of education is dropping in the successive age groups (Chart III.8). This is especially visible in the case of the share of people with higher education diminishing with age. Among the 30-year-olds, every third person is a holder of a higher education diploma, a fact true only for fewer than every fifth person 40+, and only every tenth member of the 50+ group. Let's remember that as many as 37% of today's 20+, either already graduated from or continue higher education.

<sup>49</sup> More precise analyses concerning education are presented in the report *Wykształcenie, praca i przedsiębiorczość Polaków* from the third round of the BKL Study [Czarnik, Turek, 2012].

There is a visible increase of the share of people with basic vocational education growing with age to approximately 40% in the group of 40+ and 50+. This type of education was beyond doubt more popular among men. Similarly, the share of people with secondary technical education grows with age. In younger generations, this type of education is definitely less popular.

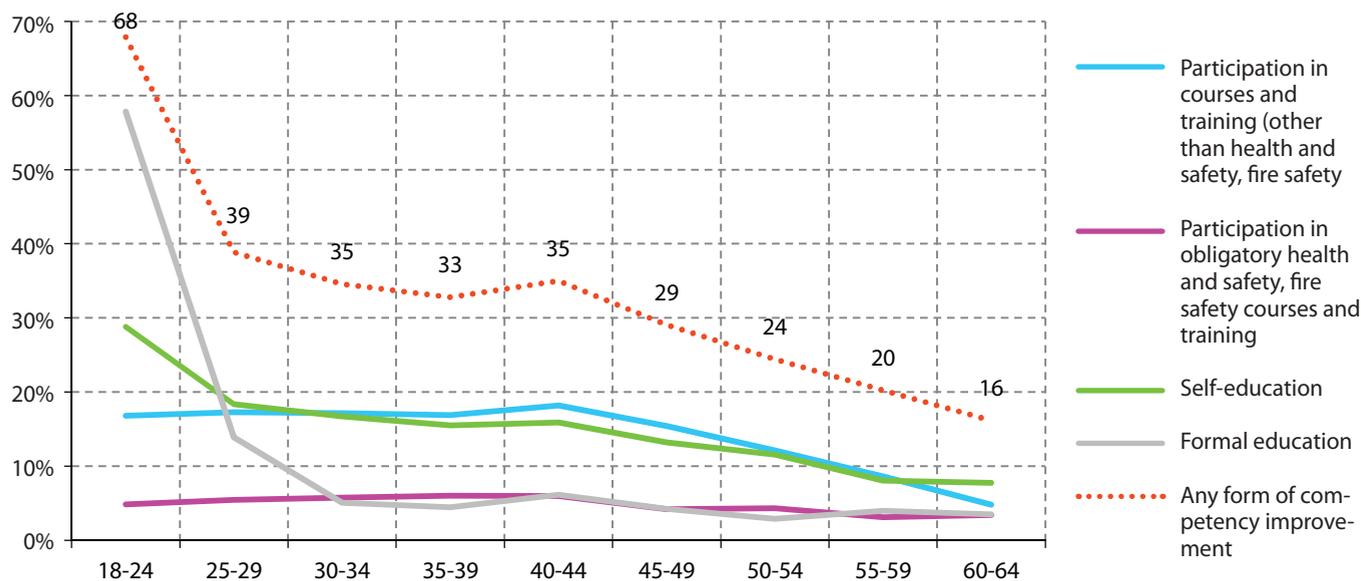
### 4.2. Lifelong learning

It is evident that the intergenerational differences in the type and profile of education are vast in Poland. Let's remember that, although not decisive, these are the years spent in schools and HE institutions that to a great extent define a certain general direction of further occupational life, and the scope of opportunities and potential in the labour market. Formal education is a certain synthetic indicator of the set of competencies and skills that, besides aspirations, play a key role in the shaping of our career path. Competences may, however, be gained also in another manner, e.g. through work and other forms of education. Let's therefore take a look at the educational activity of older generations, other than formal education.

For years, the participation of Poles in lifelong learning, i.e. courses, training, postgraduate studies, workshops and other forms of learning after the completion of formal education has been very low. It is especially low in the older age groups.<sup>50</sup> Moreover, a systematic drop of training and learning activity is visible approximately from the age of 45 (Chart III.9).

**Chart III.9.**

**Improving competencies in the last 12 months, broken down by age. Proportion of people who participated in the given type of education**



Source: BKL – Population Study 2012.

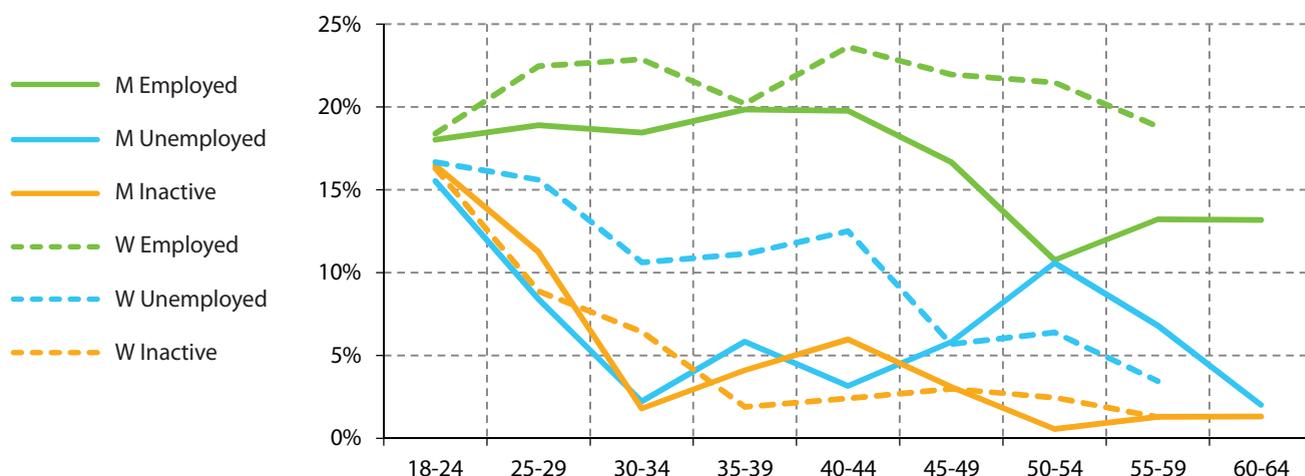
<sup>50</sup> Detailed information about participation in lifelong learning in 2012, can be found in the report entitled *Kształcenie przez całe życie* [Szczucka, Worek, Turek, 2012].

**Ageing of the population as a challenge for economy, labour market, politics, and citizens**

Most significant from the point of view of lifelong learning is the involvement in the formal courses and training. We leave out the participation in the obligatory courses in health and safety and fire safety, which was fairly stable at the level ranging from 4% to 6% in all age groups. Accounting for the labour market situation of the respondents, a greater learning activity is observed among the working, especially among the working women (Chart III.10).

**Chart III.10.**

**Participation in courses/training other than safety at work and fire safety in the last 12 months, broken down by labour market situation and sex (in %)**



M – Men; W – Women.

Source: BKL – Population Study 2012.

Participation in non-obligatory courses and training among the working women was fairly stable and involved slightly over 20% of every age group, falling slightly from the age of 45 to reach the level of 19% in the pre-retirement group. In turn, in the case of men, the drop following the border value of 45 years is far greater as it reaches the level of 11%–13%.

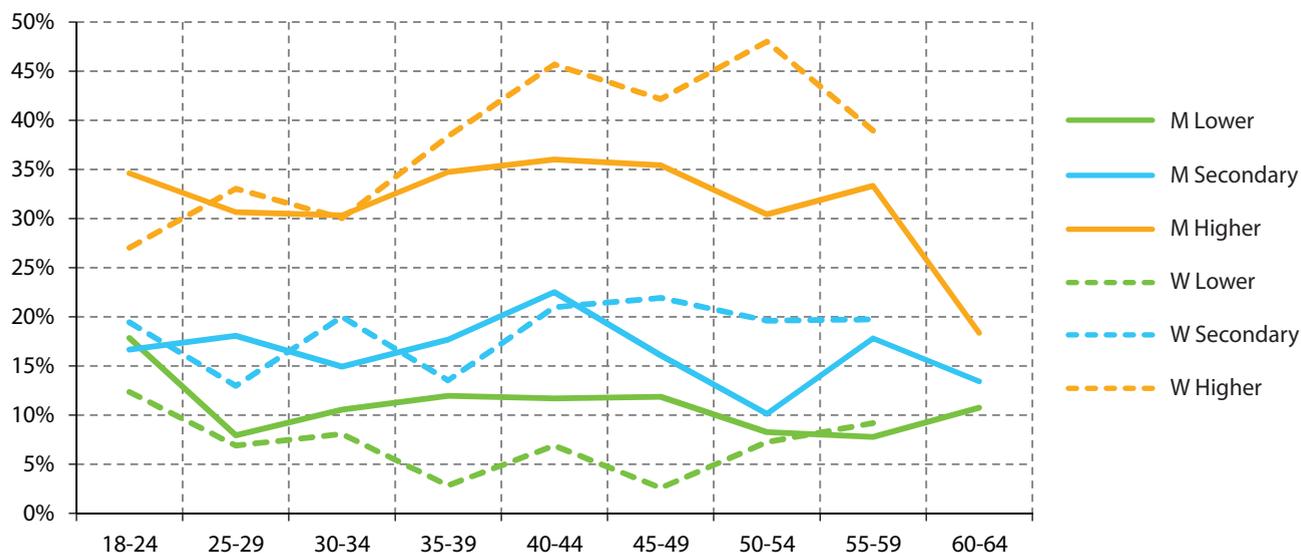
In the case of the unemployed women aged 18–44, participation in courses and training is visibly higher than among men. Nevertheless, after the 45th birthday, we observe a clear drop among women. The situation among the unemployed men is very different. At 45+, and especially in the group 50+, a major increase of participation in such forms of education is visible. This may result from greater availability of courses and training addressed to this age group of the unemployed, which – as the studies prove – does not concern women.

Involvement of the inactive population in education remains at a very low level of a few per cent, beginning with the category of the 30+.

One of the most important factors shaping the educational activity was the level of formal education (Chart III.11). In the case of the working population, it was of far greater importance than age. Participating in courses and training were primarily people with higher education. Among the working women of 40+ and 50+ holding HE diplomas, learning activity was even on the rise.

**Chart III.11.**

**Participation in courses/training other than safety at work and fire safety in the last 12 months among the working population, broken down by education and sex**



M – Men; W – Women.

Source: BKL – Population Study 2012.

Returning to a broader picture of lifelong learning, accounting for all educational activity (also self-education), it must be emphasised that as many as 88% of the unemployed people aged 50–59/64 participated in no form of learning in the 12 months preceding the third round of the BKL Study, with the corresponding share of the working population being 70%, and of the inactive – 94%. It is significant that every third Pole aged 50–59/64 has never in their lives participated in courses, training, workshops, internships, or other forms of non-formal education.

Concluding, it is generally known that educational activity of adult Poles is low, and the older age groups record lower ratios than the younger ones. Can we, however, state that, in the case of the older people we observe a general aversion to learning? The answer is not clear. The lower ratios result from three basic reasons.

The first refers to the role of the employers, who in most cases pay for the training and decide who to delegate to it. From their point of view, a characteristic feature of the situation of the older employees (approaching retirement) is the lower “developmental potential” which means that an investment in their training will bring lower profit due to the expected shorter period of return, i.e. employment. Such a narrow perception of cost and benefit calculation may be significant for decisions about addressing training activities.

Secondly, most people who did not participate in courses or training indicated internal barriers: they did not feel the need to improve their competencies for professional reasons, and they also lacked time and/or motivation. This is accompanied by a systemic drop in the readiness to retrain with age. In the age group 50–59/64, the reason to resign from training visibly more often was the conviction that it makes no sense to learn at this age. Older employees, slowly getting ready to retire, believe this to be a loss of time. Among the unemployed, passivity may be interpreted as lack of faith in the sense and significance of such activity for increasing their employability opportunities. Not without significance is also the frequent maladjustment of the scope of knowledge transferred at training sessions to the competencies and needs of the recipients, which additionally leads to a drop of interest in participation in courses and/or training.

The third factor, which is frequently missed out, is a certain statistical simplification resulting from the application of general indicators. Let's, however, not forget that comparing the older and younger age cohorts, we compare generations that differ, among others, in the structure of education. As Chart III.11 shows, the differences in educational activity between the cohorts are not as big as between the groups at specific levels of education. In the older groups, the share of people with higher education decreases, and they are the ones who learn most often. This translates into a decrease in the general educational activity indicators for the entire age group of senior citizens. In other words, it is not the age that is decisive for participation in lifelong learning. Among all social and demographic distinctive factors, it is the education (which includes also the type of job performed, and a range of other features correlated with education). This was corroborated by investigations of logistic regression from the second round of the BKL Study [Szczycka, Turek, Worek, 2011]. They show that the usual participants in courses and training were well educated people, young or middle-aged, economically active, living in cities, and holding (currently or in the case of the unemployed – previously) managerial, professional, and associate professional jobs. This, however, does not change the fact that participating least often in lifelong learning are the people who could be most keen on improving their knowledge and competencies, i.e. the poorly educated and the unemployed.

### 4.3. Competencies

One of the goals behind the BKL Study is to measure the self-assessment of respondent competency levels.<sup>51</sup> This is obviously not a method that is used as a tool for an unconditional assessment of the human capital as it is based on an entirely subjective evaluation of the respondents. Nevertheless, it is helpful in tracing the relative differences in the self-assessment between various categories of respondents and the differences between the assessment of individual competencies. The previous rounds of the BKL Study have already analysed the questions of the link between the self-assessment and factors (e.g. the age of the respondents) [see: e.g. Czarnik, Turek, 2012]. They can be briefly summarised with a short statement that, generally, the absolute self-assessment of nearly all competencies, with the exception of the technical ones, tends to drop with age (with the control of the remaining variables: sex, number of years, education, and occupation). This is most strongly visible in the case of computer and physical competencies. Such an analysis, however, carries significant limitations. First, what is analysed is the effect of the cohort and not the effect of age, which means differences between various people of various age, and not the average changes during the lifecycle of an individual. As far as it can be safely stated that physical fitness drops while the organism is ageing (according to studies, humans are physically strongest between the 20th and 30th year of life, with fitness gradually diminishing until the age of 40–50, when it usually experiences a rapid drop [Silverstein, 2008]), in the case of handling computers, what we deal with is a generation gap: the effect of the IT “revolution” of the past decades (if, however, we account for the variation related to education, we note that the level of the drop in computer competencies in successive cohorts diminishes with increasing level of education, and also depends on the type of the job). Secondly, people with various natures assess themselves according to their subjective level of reference and therefore the “very high” level may mean something different for different respondents. This is especially significant in the case of comparisons between the generations, as during the successive years of everyday life and work, people have an opportunity to become familiar with their potential and verify its assessment. What also frequently drops with age is the general self-assessment of individuals (irrespective of the level of the individual competencies). In turn, younger generations may have a tendency to higher self-assessment and lower self-criticism.

Presented below is therefore a cursory analysis of self-assessment of the selected competencies based on the so-called mean centred data. This means that for a specific respondent, the self-assessment of individual competencies is compared to the average level of all the respondent's ratings. In this procedure, the mean level of assessment of all the competencies of the given person is 0, while values assigned to indivi-

<sup>51</sup> The respondents were asked a question: “Now I'm going to read a list of different skills to you. For each of them, I will ask you to assess the level of your skill in this area on a 5-point scale, where: 1 denotes low level, 2 – basic, 3 – medium, 4 – high, and 5 – very high.” In the BKL studies of 2012, the list of competencies consisted of 32 items arranged into 12 more general categories. For more details please turn to the annual reports concerning BKL population studies.

dual competencies are either positive (above the average) or negative (below the average). In this way we eliminate the difference in the level of general self-assessment (self-criticism) between respondents who use different subjective scales.

We can therefore analyse how the respondents assessed individual skills as related to others. An analysis of the entire set, together with the control of many significant factors goes beyond the potential scope of this chapter. This is why Table III.2 presents only average ratings of selected competencies broken down into age categories. Additionally, the data is mean centred by line (for each variable), which means that for every age group the average total value for the variable was subtracted from the average value (i.e. what the table presents is the deviation from the mean of self-assessment in the given group for the total). In this way, it is easier to follow the changes that take place between the successive age groups (shown in the table through colours). The original absolute (non-centred) values are given in the last line and in the last column.

Interpreting data from Table III.2, let's first examine the last line, that is non-centred average self-assessments of all competencies for age groups, which are systematically dropping. As has been mentioned, this is true about nearly all the competencies, although it depends on many factors. Secondly, it makes sense to look at the last column that informs about the average absolute assessment of competencies by all the respondents. Major differences are visible also here. Generally, respondents assessed themselves highest in interpersonal and self-organisational competencies. Lowest – in artistic, office (not presented in the table), and managerial competencies. Following the mean centring, all these differences (the differences between average ratings between respondents, and differences of average ratings between competencies) were removed (as portrayed in the rows and the column mean equal to zero), leaving relative differences within individuals (differences between self-assessments of a set of respondent's competencies), and between age groups.

**Table III.2.**

Mean values of self-assessment of selected competencies in 2012, broken down by age. Data mean centred for each individual (columns), and competencies (rows)

Selected competencies	Age									Total	Total (A*)
	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64		
Operating, assembling, and repairing devices	-0.25	-0.22	-0.13	-0.05	0.06	0.05	0.15	0.15	0.86	0	2.86
Solving conflicts between people	-0.13	-0.12	-0.04	-0.04	0.01	0.05	0.13	0.17	0.14	0	3.31
Group cooperation	-0.07	-0.11	-0.09	-0.01	0.00	0.06	0.10	0.13	0.08	0	3.91
Ease in establishing contacts	-0.09	-0.09	-0.05	-0.01	0.00	0.04	0.11	0.11	0.06	0	3.89
Communicativeness	-0.08	-0.08	-0.04	-0.02	0.01	0.07	0.10	0.10	0.03	0	3.83
Coordinating the work of other staff	-0.24	-0.07	0.05	0.03	0.05	0.03	0.09	0.11	0.21	0	3.05
Disciplining other staff	-0.23	-0.11	0.00	0.01	0.04	0.02	0.14	0.14	0.27	0	2.95
Managerial skills and organisation of work	-0.20	-0.06	0.07	0.03	0.03	0.01	0.07	0.10	0.15	0	3.04
Timely completion of planned activities	-0.19	-0.07	-0.03	0.05	0.04	0.09	0.09	0.09	0.09	0	3.73
Making independent decisions	-0.12	-0.05	0.00	0.01	0.04	0.05	0.07	0.06	0.06	0	3.64
Entrepreneurship and showing initiative	-0.15	-0.01	0.03	0.02	0.07	0.05	0.06	0.02	0.04	0	3.40
Availability	-0.03	-0.01	-0.13	-0.07	-0.01	0.07	0.10	0.10	0.03	0	3.64
Flexible working time	0.02	-0.05	-0.13	-0.07	0.05	0.10	0.07	0.02	0.01	0	3.39
Logical thinking, factual analysis	-0.02	-0.02	-0.01	-0.02	-0.01	0.03	0.00	0.04	0.05	0	3.47
Resilience to stress	-0.11	-0.03	-0.02	0.03	0.02	0.01	-0.02	0.01	0.10	0	3.39
Creativity	-0.03	0.05	0.04	0.03	0.03	0.00	-0.02	-0.05	-0.05	0	3.40
Continuous learning of new things	0.10	0.05	0.04	0.00	0.03	-0.01	-0.06	-0.12	-0.15	0	3.53
Basic command of MS Office	0.58	0.40	0.23	0.03	-0.11	-0.30	-0.43	-0.51	-0.61	0	2.81
Command of specialist software, writing applications, web authoring	0.31	0.14	0.07	-0.02	-0.12	-0.18	-0.18	-0.16	-0.15	0	2.05
Computer and Internet literacy	0.62	0.40	0.22	0.09	-0.10	-0.27	-0.47	-0.58	-0.75	0	3.14
Physical fitness	0.30	0.14	0.11	0.05	-0.01	-0.09	-0.19	-0.31	-0.39	0	3.52
Average from all the 32 competencies	0	0	0	0	0	0	0	0	0	0	3.27
Average of all the 32 competencies (A*)	3.41	3.52	3.45	3.37	3.31	3.20	3.06	2.95	2.89	3.27	

\*A – absolute (non-centred) data.

Source: BKL – Population Study 2012.

In such portrayal of competency self-assessment, we find three groups of competencies (accounting also for the items not presented in the table):

1. Showing a clear relative increase in successive age groups: assessed relatively high among the older and low among the younger, and including technical (handling, assembly, and repair of equipment), interpersonal (including contacts with other people, group work, competitiveness), some self-organisational (e.g. independent making of decisions, timeliness), managerial (coordinating and disciplining other staff, organisation of work) competencies, availability and flexible working time, logical thinking, and analysis of facts.
2. Not showing a clear and monotonic link to age: assessed similarly by different age groups against other competencies, and including entrepreneurship, resilience to stress, seeking information, creativity, mathematical skills, artistic skills, organisation and conducting office works, fluent command of the Polish language.

- Showing a clear relative drop in the successive age groups: assessed relatively high among the younger, and low among older, and including physical fitness, continuous learning of new things, and all the more and less advanced computer skills.

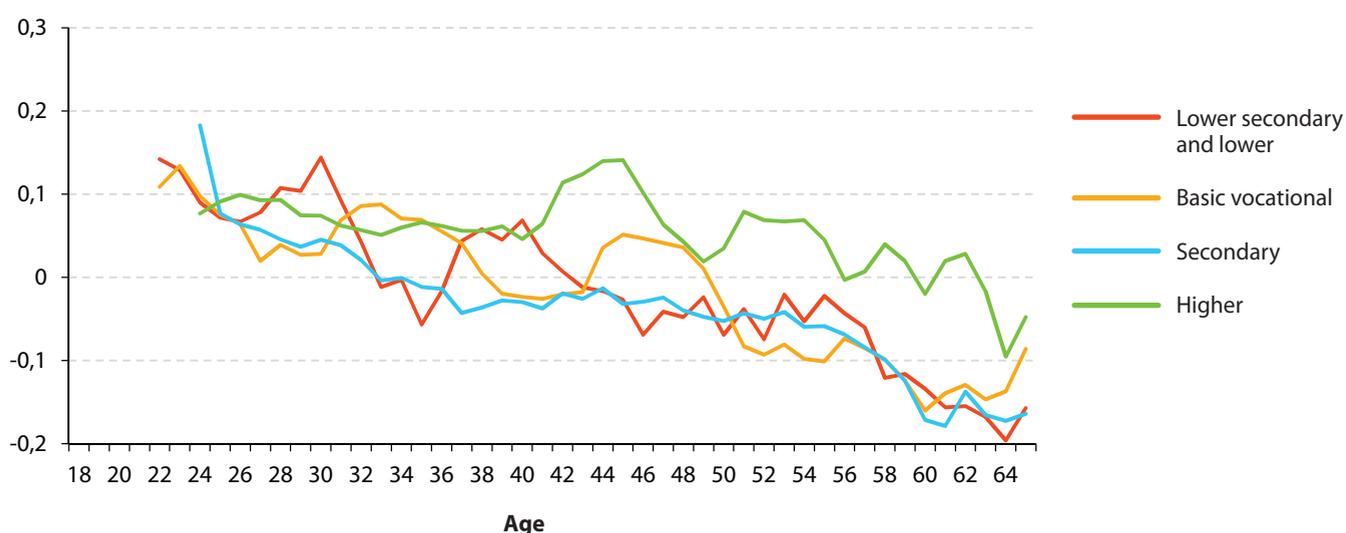
This differentiation of assessment reflects two processes: the differences between generations, and the process of ageing. The physical and computer competencies mentioned above dropped with age, both in the absolute and centred ratings, although the main reasons for these changes depend on distinct processes. It is worthwhile to take a closer look at the three groups of competencies which are very important in the contemporary labour market, namely, cognitive, and interpersonal, and organisational.

Cognitive abilities may be perceived as absolutely basic cognitive functions related to the intellectual potential, seeking and learning information, drawing conclusions, and conditions and circumstances for gaining new knowledge and skills. [Lubinski, Dawis, 1992; Willis, 1996]. These talents influence the quality of thinking processes and the everyday functioning of the individual. Of hardly perceptible nature, they are deeply embedded in the psyche, and primary towards many other more concrete traits and talents. In many cases, the individual is not fully aware of them, in others – they may be recognised incorrectly. This to a great extent results from the fact that they are manifested indirectly, in actions and effects of functioning in various circumstances. An attempt at grasping them in the BKL Study through self-declaration was risky, nevertheless it pays to take a closer look at the results achieved.

In the case of cognitive competencies which were the subject of the questions, two were most important, namely, the learning skills, and logical thinking and analysis of facts. Their changes between the age groups, with the additional breakdown by education, are presented in charts III.12 and III.13.

### Chart III.12.

Mean values of self-assessment of the competency “continuous learning of new things” in 2012, broken down by age

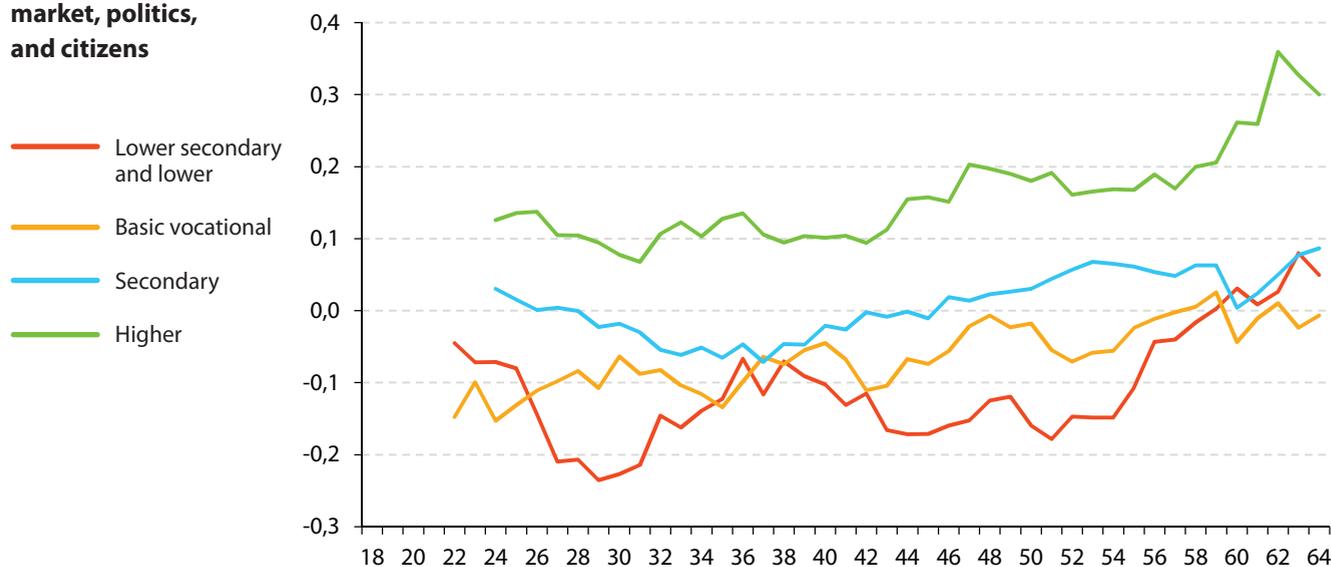


Mean centred data  
 The rows present 5-year moving averages.  
 Source: BKL – Population Study 2012.

**Ageing of the population as a challenge for economy, labour market, politics, and citizens**

**Chart III.13.**

**Mean values of self-assessment of the competency “logical thinking, factual analysis” in 2012, broken down by age**



Data centred for each individual (0 denotes the average for all the competencies assessed).

The rows present 5-year moving averages.

Source: BKL – Population Study 2012.

Much like in the previous case, the data was centred and the interpretation concerns only changes in the relative assessment of the given scale compared to the remaining competencies. What we observe first of all are tendencies opposite to changes with age: learning skills drop fairly clearly, and the skill of logical thinking is growing only slightly. Obviously, we are aware of the superficial nature and doubts concerning such a way of examining skills so difficult to grasp, yet let's treat this analysis as a contribution to digressions on the psychology of the ageing process. If, therefore, we should recognise the drawing of conclusions on cognitive capacities based on self-declarations justified, we can state that the changes observed are in line with psychological studies and reflect various types of cognitive abilities. Some of them deteriorate with age, which is related to the structural changes in the brain, while others remain relatively stable or even improve [Arking, 2006, Van der Berg et al., 2009].

What drops at an older age is the so-called Fluid Intelligence (Gf, to use a term from the popular Cattell-Horn-Carroll intelligence theory), covering learning skills, speed of perception, the skill of drawing logical conclusions (e.g., while completing standard IQ tests. [see: Skirbekk, 2004]). It is here that the skill of “continuous learning”, assessed by BKL Study respondents, belongs. In return, usually the cognitive potential based on cumulating knowledge and experience continues to grow throughout the lifetime. It includes also the so-called crystallized intelligence (Gc), that is the meaning of words, reading skill, combining information, language skills, and the scope of vocabulary. What is, however, most important from the point of view of economic activity is the growth of experience itself, and of practical and specialist knowledge [Blakemore, Hoffman, 1989; Sternberg, 1985; Warr, 1994]. They are the main source of efficiency in intellectual functioning of senior individuals: they help to cope in well-known environment, understand its problems and mechanisms that govern it. Therefore, also within this framework, the increase in the self-rating of the skill of “logical thinking and analysis of facts” should be interpreted by referring it rather to the operation in the everyday world, and not to the skill of drawing abstract logical conclusions.

Changes in these two levels of intelligence were empirically proved for men and women from various countries and cultures, nevertheless, the lines defining the trends differed among others in respect to the occupation, conditions of work, and lifestyle [Engelhardt et al., 2010]. Literature emphasises that an active lifestyle, participation in social life, physical activity, and primarily educational and intellectual activity

make it possible to maintain high cognitive functionality at an older age. A concept of a cognitive reserve [Stern, 2002] suggests that education and work may build a reserve that to a certain degree may cushion the deterioration of many cognitive abilities at an older age. This would mean that well planned training and lifelong learning, together with more complex, absorbing and demanding work are capable of withholding the negative cognitive effects of the ageing process, and even contribute to further development and increase of labour productivity [Dearden et al., 2006; Skirbekk, 2008]. Using opinion polls, it is impossible to perform an in-depth realistic analysis of these aspects. Let's therefore do with the observation that in the case of cognitive competencies, the people with higher education assessed themselves highest, and people who completed only the primary or lower secondary school rated themselves lowest.

Much more trust can be vested in the self-assessment of respondents concerning interpersonal skills, including cooperation in a group, easy making of contacts with colleagues, communicativeness, and the skill of solving conflicts between people. On the grounds of centred data, their self-assessment clearly grows in the successive age groups, i.e. they are rated relatively higher (against other competencies) by the older than by the young. Similarly, growing with age of the respondents were the relative self-assessments of organisational and managerial competencies. Their number included: entrepreneurship and showing initiative, independent making of decisions, managerial abilities, skill of organising work, coordination of work of other employees, timely completion of actions. As results from the studies of the employers, all the competencies listed in this paragraph are highly valued in businesses. Yet how are the older employees assessed, and does age really play a significant role in professional life? This leads us to taking a look at the labour market from the other side, that is, through the eyes of the employers.

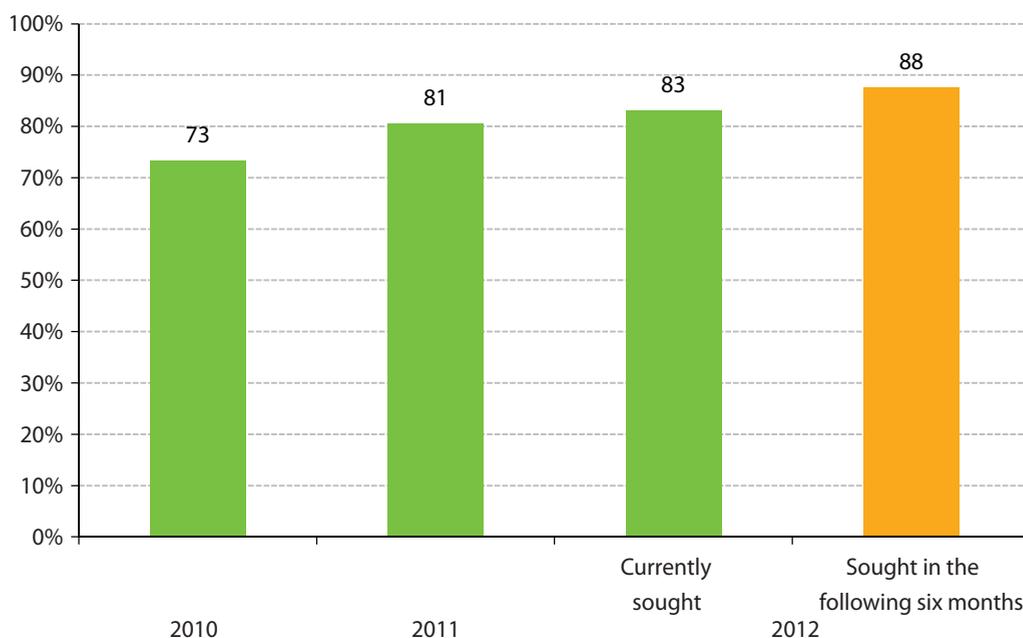
## **5. The employer perspective: candidate and employee age, and age management**

In this section, let's take a look at the ageing resources of workforce from the employers' perspective. Although in employer studies conducted as part of the BKL, we do not tackle the questions related to age management, yet an analysis of the process of recruitment, together with the answer to the question to what degree the age of the candidates matters may bring interesting conclusions.

Nearly identically with the previous two years, in 2012, approximately 17%, employers sought new personnel at the time when the study was conducted. The respondents from these companies were asked about the appropriate age of the person sought to a specific position (Chart III.14). Age proved to be significant for 83% of employers (while a year ago, the proportion was 81%, and two years ago – 73%). In the case of the companies who were not currently seeking but intending to employ new people during the coming six months (18% of all employers in 2012), age mattered for no fewer than 88%.

**Chart III.14.**

**Percentage of employers with specific preferences concerning the age of candidates sought to work in 2010–2012**



*In 2012, an additional question about requirements concerning the age of potential staff intended to be enrolled during the following six months, was asked.*

*The percentage of the employers currently seeking personnel (additionally, in 2012: the percentage of the employers intending to seek during the coming six months).*

Source: BKL: Employer Study 2010–2012.

Preferences concerning the age of the candidates were most often declared in the case of unskilled staff (in as many as 92% of cases, based on the aggregated data from 2010–2012; see: Table III.3). Such preferences were not much less often present in the case of candidates for operators and assemblers, service workers, and skilled workers. They emerged least often in the case of professional and managerial positions (although even here seven out of ten companies declared specific preferences).

It makes sense to emphasise that the proportion of respondents declaring age preferences towards candidates clearly diminished proportionally to enterprise size. In companies employing up to 9 people, the rate of age-preferring answers accounted for 80% of responses, employers of 10–49 people: for 74%, 50–249 – 62%, and in companies employing over 250 – for only 56%.

**Table III.3.**

**Percentage of employers with specific preferences concerning the age of candidates sought to work at the time of the study, and the average value of the minimum and maximum preferred age of candidates, broken down into ISCO-1 and ISCO-2 job groups (combined data from 2010–2012)**

**The employer perspective: candidate and employee age, and age management**

ISCO-1 and ISCO-2 job groups	Share of employers with preferences concerning candidate age	Preferred candidate age				
		From		To		N
		Average	SD	Average	SD	
<b>1 MANAGERS</b>	<b>72</b>	<b>27</b>	<b>4</b>	<b>45</b>	<b>7</b>	<b>108</b>
11 Chief executives, senior officials and legislators	76	<b>28</b>	3	<b>52</b>	3	19
12 Administrative and commercial managers	56	<b>27</b>	4	<b>45</b>	9	32
13 Production and specialised services managers	86	<b>27</b>	4	<b>43</b>	7	50
<b>2 PROFESSIONALS</b>	<b>67</b>	<b>26</b>	<b>5</b>	<b>43</b>	<b>11</b>	<b>963</b>
21 Science and engineering professionals	74	<b>24</b>	4	<b>43</b>	11	204
22 Health professionals	59	<b>30</b>	6	<b>51</b>	12	215
23 Teaching professionals	77	<b>24</b>	3	<b>40</b>	11	100
24 Business and administration professionals	66	<b>24</b>	3	<b>39</b>	9	230
25 Information and communications technology professionals	69	<b>24</b>	5	<b>42</b>	10	113
26 Legal, social and cultural professionals	75	<b>27</b>	5	<b>45</b>	9	101
<b>3 TECHNICIANS AND ASSOCIATE PROFESSIONALS</b>	<b>76</b>	<b>24</b>	<b>4</b>	<b>42</b>	<b>10</b>	<b>809</b>
31 Science and engineering associate professionals	77	<b>25</b>	4	<b>47</b>	12	103
32 Health associate professionals	80	<b>23</b>	3	<b>41</b>	10	117
33 Business and administration associate professionals	76	<b>25</b>	4	<b>42</b>	10	476
34 Legal, social, cultural and related associate professionals	90	<b>23</b>	5	<b>45</b>	11	70
35 Information and communications technicians	61	<b>21</b>	3	<b>34</b>	5	43
<b>4 CLERICAL SUPPORT WORKERS</b>	<b>75</b>	<b>23</b>	<b>6</b>	<b>41</b>	<b>10</b>	<b>341</b>
41 General and keyboard clerks	77	<b>23</b>	5	<b>45</b>	10	158
42 Customer services clerks	72	<b>23</b>	4	<b>37</b>	7	62
43 Numerical and material recording clerks	77	<b>22</b>	4	<b>38</b>	10	102
44 Other clerical support workers	90	<b>22</b>	3	<b>38</b>	8	19
<b>5 SERVICE AND SALES WORKERS</b>	<b>84</b>	<b>23</b>	<b>6</b>	<b>41</b>	<b>10</b>	<b>1199</b>
51 Personal service workers	85	<b>22</b>	4	<b>38</b>	8	463
52 Sales workers	84	<b>23</b>	5	<b>42</b>	9	670
53 Personal care workers	82	<b>26</b>	5	<b>47</b>	12	32
54 Protective services workers	83	<b>36</b>	13	<b>61</b>	10	34
<b>7 CRAFT AND RELATED TRADES WORKERS</b>	<b>80</b>	<b>23</b>	<b>4</b>	<b>45</b>	<b>10</b>	<b>1583</b>
71 Building and related trades workers, excluding electricians	87	<b>22</b>	4	<b>45</b>	9	812
72 Metal, machinery and related trades workers	75	<b>23</b>	5	<b>45</b>	10	388
73 Handicraft and printing workers	74	<b>24</b>	4	<b>47</b>	12	17
74 Electrical and electronic trades workers	81	<b>22</b>	4	<b>43</b>	10	168
75 Food processing, wood working, garment and other craft and related trades workers	68	<b>23</b>	6	<b>47</b>	10	198
<b>8 PLANT AND MACHINE OPERATORS, AND ASSEMBLERS</b>	<b>86</b>	<b>24</b>	<b>4</b>	<b>47</b>	<b>10</b>	<b>859</b>
81 Stationary plant and machine operators	81	<b>22</b>	3	<b>44</b>	7	86
82 Assemblers	92	<b>23</b>	3	<b>44</b>	6	44
83 Drivers and mobile plant operators	88	<b>24</b>	4	<b>47</b>	10	724
<b>9 ELEMENTARY OCCUPATIONS</b>	<b>92</b>	<b>23</b>	<b>5</b>	<b>44</b>	<b>9</b>	<b>322</b>
91 Cleaners and helpers	86	<b>23</b>	5	<b>47</b>	8	59
93 Labourers in mining, construction, manufacturing and transport	95	<b>23</b>	5	<b>45</b>	9	144
94 Food preparation assistants	98	<b>23</b>	5	<b>45</b>	7	46
95 Street and related sales and service workers	100	<b>20</b>	0	<b>40</b>	0	14
96 Refuse workers and other elementary workers	95	<b>23</b>	7	<b>41</b>	11	19
<b>TOTAL</b>	<b>79</b>	<b>24</b>	<b>5</b>	<b>44</b>	<b>10</b>	<b>6155</b>

SD – standard deviation.

Source: BKL: Employer Study 2010–2012.

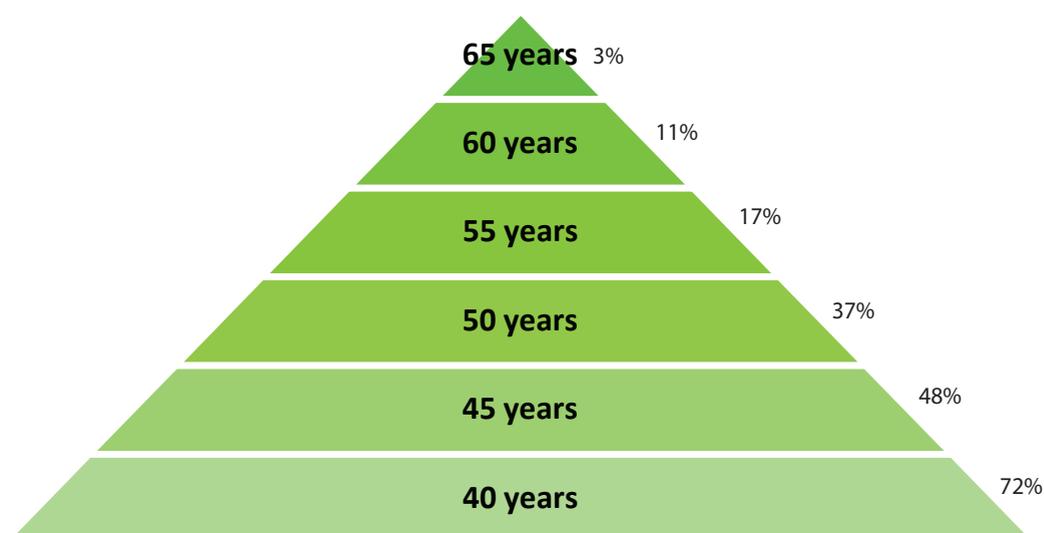
Let's take a closer look at the precise expectations towards candidates as declared by the employers. The original value of the preferred candidate bottom age limits declared by the employers was 24 (Table III.3), with fairly low variability between the answers (standard deviation = 5). Only in the case of managerial and professional job groups, the average value was significantly higher, 27 and 26 years, respectively (yet the variety in the answers remained at the same, low level). In individual cases also higher values occurred, e.g. in the case of protective services workers (36 years).

A slightly higher variety could be observed in the case of the upper age limit. For all the respondents in the three rounds of the study, the average was 44 years, and the standard deviation – 10 years. The oldest candidates were preferred to work on positions in operator and assembler job groups (on average below 47). It must be added that only in the case of three ISCO–2 level groups, the limit of 50 years was exceeded. These were: 1.1 chief executives, senior officials, and legislators, 2.2 health professionals, and 5.4 protective service workers (mostly janitors). The age limit was set lowest for clerical support and service workers (up to 41).

Looking again at the preferred age from the general perspective, we see that in the last three years only 11% of employers seeking employees (who expressed age-related preferences) accepted workers at 60 or more (Chart III.15). Just over a third accepted a 50-year-old or older candidate. Let's, however, remember that in the case of 21% of employers seeking staff in 2010–2012, the age of the candidate did not matter. Assuming that they would accept a person at any age, it can be said that every other employer would be likely to employ a person of 50.

**Chart III.15.**

**Percentage of employers (expressing age-related preferences) seeking employees who accepted a candidate at the given age or older (aggregated data for 2010–2012)**



*The calculations are based on the answer to the question: "What should the age bracket for a person to this position be?" With answers. "From ... to..." And "It doesn't matter to me." (i.e. lack of age-related preferences).*

*Data for the employers who expressed age-related preferences towards candidates (79% of the respondents). For the remaining 21% of employers seeking personnel, the age of the candidate did not matter.*

*The values expressed in % denote for example that 37% of employers who expressed age-related preferences would accept a person of or over 50 to work (and 63% would not), while only 11% would accept a person of 60 or over (and 89% would not accept such a person).*

Source: BKL: Employer Study 2010–2012.

Interestingly, age was more often taken into consideration than the candidate's experience. Paying attention to the latter were 65% of companies recruiting staff at the moment of the study. Even if experience was not required from the employees, still in 74% of cases, employers had specific preferences concerning the age of the candidates.

This data clearly shows that age is one of the significant features of the candidates in the process of recruitment, and employers prefer to employ younger or middle-aged people, i.e. from over 22 to slightly over 40. Although there is a certain variation in the answers of the respondents, for example, depending on the type of the job and sector, yet it is very small. This is not altered by the fact that placement of age-related preferences in job offers is legally forbidden. Although the age does not have a direct impact on an employee's productivity, it is one of the basic attributes defining the stage of a person's development and potential for the employers. Generally, old age is considered the period of lower productivity [Silverstein, 2008]. The results of multiple studies suggest that the general ability to work efficiently often declines at an older age. Depending on the job and the circumstances, the peak of productivity is usually achieved by employees at 30 or 40. After the 50th birthday, productivity tends to fall rather than to rise (see the reviews: [Skirbekk, 2004, Engelhardt et al., 2010; Silverstein, 2008; Wei, Richardson, 2010]). This, however, is not a universal and unchanging trend, while an older age does not have to be the period of lower efficiency. This depends on a range of factors concerning the employee, employer, and type of work.

At least since the 1970s, psychology and medicine have significantly expanded our knowledge of the individual determinants of productivity and changes that take place with age at the level of the functionality of human body and mind. Scientific research proves a drop in many skills of general nature at an older age. [Kalwij, Vermulen, 2008, Kenny et al., 2008]. There is no doubt that health, physical power, agility, sensory skills, speed, and many other physiological functionalities deteriorate with the ageing of the organism. Nevertheless, the significance of physical work diminishes in today's economy. Growing in its stead is the significance of cognitive capacities, including: the drawing of conclusions, intelligence, and analytical, verbal and learning skills. We have also mentioned that some of them grow with age, others have a tendency to drop, yet much depends on the activity (e.g. educational) throughout life. Most significant productive resources at an older age include experience, practical knowledge, and specialist know-how that make older employees experts in an environment they know. Yet in new conditions and with new duties (e.g., faced with fast technological progress) requiring high learning skills and adjustments, they may experience more problems and cope more poorly than younger people. [Munnell, Sass, 2008].

Efficiency of older personnel at work depends, however, not only on their individual potential, but also on the job, profile of work, tasks, and requirements. Importantly, the working environment, and appropriate age management may allow greater and better use of the staff's capacities, increase their motivation, and help to increase the productivity of older employees. Not insignificant here is the role of opinion – and frequently also bias and stereotypes – among the employers, which can influence the way that the company operates [Casey, Metcalf, Lakey, 1993; Taylor, Walker, 1998; Oswick, Rosenthal, 2001; Loretto, White, 2006]. Significant also for the employer will be the developmental potential of employee mentioned earlier, that is, the assumed total added value resulting from the investment in the envisaged period of further employment in the company. In other words, in their actions, employers accounts for the potential period in which the employee will bring profit. From this point of view, the employees who – as the employer believes – will not abandon the company in the nearest future by moving to a competitor or into retirement are of greater developmental potential. The employers preferring young or middle-aged staff will not be likely to invest in the development of older employees, nor in age management, nor in career planning, nor in training programmes. In turn factors including unfavourable attitude of the employer, lack of potential development, and lack of job satisfaction may, in the case of older employees, have a negative impact on the engagement and productivity, and also on earlier labour market exit. This builds a particular vicious circle, which has a negative impact on both the parties of the job contract.

Age management is still very poorly developed in Poland, as compared to Western states [Perek-Białas, Turek, 2012]. Awareness that property management of the available competency resources (in longer and broader perspective) may lead to increasing the efficiency of the entire team of employees and to winning competitive edge is still missing. It goes without saying that employers themselves will quickly discover

the solutions that will let them cope with the new situation in the labour market. The changes are visible already today. An increasing number of businesses consciously introduce elements of age management, for example, planning of the professional career development, mentoring and internal training conducted by experienced personnel, flexible working time, age differentiation in teams, ergonomic solutions, and plenty of others. Investment in older personnel does not need to aim solely at the improvement of their situation. It can also increase loyalty and involvement of younger staff, presenting them with a vision of stable employment, ensuring the possibility of development and long activity. It may also reduce significantly the cost of education thanks to introduction of internal training and mentoring programmes.

## Summary

The ageing of population is a global phenomenon. Looking at the world of tomorrow, one needs to remember that this process means not only an increasing count of the retired people or the age category of 50+. These are slow, yet profound demographic changes that have an impact on a range of social and economic mechanisms, including the labour market. In this chapter, we tried to present the most important of these changes envisaged currently by the experts. In most cases, negative consequences of the process of population ageing are associated with the burden on the social protection and human health care systems, and also with solutions in the area of care for the older population. However, the probable consequences encompass broader areas. Workforce resources will diminish in the coming decades. The labour market will be increasingly the employee's market, and the approach to work and the professional career path will change. Employers will have to learn how to manage the limited human resources, older than they previously had. Moreover, experts foresee that the ageing of population will have a bearing on the development of some and a drop in the significance of other sectors of economy. The role of involvement of older generations in volunteering will rise. Among the unsolved questions, there still remains the impact of the process of ageing on policy. This is only the shortest possible presentation of the changes we are heading towards.

One needs to ask a question to what degree today's Poland is ready for the inevitable changes that the following decades will bring? The development of the policy concerning the older generations and the ageing population of Poland in the last two decades, presented in the second section of the chapter, does not look too impressive. One can, however, attempt at a handful of additional reflections. Today, as far as the condition of the pension system is concerned, Poland is in a relatively good starting position. The daring reform of 1999, partial limitation of retirement privileges and postponing the age of retirement make it possible to avoid drastic measures in the future. According to forecasts from 2011, besides Estonia, Poland was the only country where the public expenditure on pension and old age benefits (compared to the GDP) will drop in the coming few decades.<sup>52</sup> (That it is currently relatively high [OECD, 2011], is a different question.) The index of stability of pension systems, developed by Allianz Group for 44 countries, ranks Poland at a fairly safe place, in the middle of the group, together with e.g. Germany [Allianz, 2012]. Ranked at the very end of the index, with the strongest need for reforms of the pension system, is Greece. It must be noted that until recently Greece had the most generous pension system in the world. In Greece, the net replacement rate (i.e. the ratio between the retirement benefit paid to an individual to the earlier remuneration after deduction of taxes) in the case of people with average income amounted to the record high of 111% (in Poland: 68%, with the OECD average at 69% [OECD, 2011]), while the average age of leaving the labour market was among the lowest in Europe. In time of the crisis, the burden of increasing old-age and pension benefits proved shattering on the fiscal system. Under external pressure, Greeks decided to increase the eligible age of retirement and undertake other actions aiming at increasing the average age of transition into retirement (although even in the face of the potential insolvency of the country, the changes were very strongly opposed by the Greeks). We mentioned earlier that the gentle and evolutionary nature of the impact of demographic changes depends on the relative economic and political stability. We need to learn a lesson from the Greek crisis, namely, that activities aiming at the optimisation of systemic burdens must be taken early. Let's add that these are not only reforms of the pension system. The

<sup>52</sup> An increase of on average 3 percentage points (expressed as a share of the GDP, and compared to 2010) in public expenditure for retirement and old age benefits by 2050 is envisaged for all OECD countries. In the case of Poland, a drop by 1.7 percentage points is expected.

shifting of the eligible age of retirement will in no way automatically relieve the budget. To avoid the costs of pensions being transferred to other social costs (e.g. seniors' unemployed benefit), it is necessary to increase and expand the labour market, and give incentives to employers and employees alike. There is one more fact worth paying attention to: in the last 20 years, the ageing of population in Central Europe was far more rapid than in Western Europe. Moreover, the change has taken place and will continue in different circumstances: it can be said that West European countries first "got rich" and then "got old," while the post-communist countries will "get old" before they will have achieved a comparable level of development [Hoff, 2010]. The consequences may be felt e.g. in the level of tolerance of additional financial burdens.

The Active Ageing Index 2012, published by the European Centre for Social Welfare Policy and Research in Vienna in December 2012 ranked Poland 25th of the 27 EU states, with the score of 27 points aggregated from all the domains. Only Lithuania and Malta were behind Poland, while Greece quoted above holds the 22nd place. The spearhead are Scandinavian countries (with maximum result – 41 points – achieved by Sweden), the Netherlands, Ireland, and the United Kingdom. Germany, mentioned repeatedly in the chapter, ranks at No. 8. The ranking considered the basic dimensions of active ageing, including occupational, social, care, political, educational and physical activity, financial security, access to medical services, health and physical fitness, and the use of modern technologies. Position at the very end of the EU group is a pessimistic indicator of the situation in Poland. Today, the market indicators for the older generation of Poles are among the most unfavourable in Europe. The level of economic activity of people over 50 is very low. The case with the average age of leaving the labour market and moving to retirement, is similar. Taking also into account a broader spectrum of various activities (e.g. lifelong learning, civic activity, and recreation), it is evident that older generations of Poles are, generally speaking, very passive. This, however, does not mean that the successive age cohorts will follow similar patterns.

Ageing is a highly diverse and individualised experience. The oldest age cohorts are not homogeneous social categories. On the contrary, in many aspects they are the most differentiated age groups, and attempts at generalising any of them are as a rule too strongly simplifying. Nevertheless, the days when individual annual cohorts experienced significant stages of their lives defined conditions common (at least to a certain extent) for everyone. Especially significant here is the stage of youth and early maturity, when we grow up, socialise, learn, and later assume the basic social roles in our life: of an employee, a married person/partner, and a parent. Resulting from such an assumption is the so-called life-course approach, analysing the impact of similar life trajectories on the current situation of individuals, and also the category of a generation, popular both in social sciences and in journalism. From the sociological point of view, a generation is a category of people born at a similar time, and sharing historical experience. This joint experience translates into similarities in the way of acting and a world view that differentiates a generation from its predecessors and successors.

Using such a simplifying analytical tool, three generations living in today's Poland can be distinguished. The first and oldest of them is the one that was educated, brought up, and experienced most of their professional career in the times of socialism (People's Republic of Poland). This did not remain without impact on their today's attitude and market situation, especially when employers operating in the reality of the free market began to require the skills that were not shaped by their previous education and professional careers. The second is the generation whose youth fell still in the days of communism, yet who in majority of cases began their professional career already during the transition. They had to adjust quickly to the new, free market economy following 1990, shaping, among others, the patterns of Polish entrepreneurship. The third, youngest generation is unlikely to remember the days of the People's Republic: they were educated and grew up during Poland's membership in the EU, with open borders, and general migrations for profit, and also during the "Internet revolution". This is also the generation of mass higher education and educational advancement: in the studies of students of last years of studies (BKL Study of 2010), as many as 58% of student respondents had no parent with higher education.

Obviously, this is a highly simplified picture, yet it is useful in the discussion of the process of ageing of the population of Poland. Yet such an approach primarily stresses that we can expect the successive generations to age differently. One of the most significant differences between the generations growing up in the days of socialism and the ones whose youth or the beginnings of the professional career happened

later is the level of formal education. The educational boom of the time of transition was to a large extent caused by the eagerness to increase the market opportunities in the circumstances of large supply of labour. Low and not updated qualifications of the older people provided a factor limiting their potential of continuing in the labour market. Still present among the older generations is also the type of the so-called "post-socialist" mentality (although obviously it is not a general and dominant attitude), in which old age is mostly the period of well-deserved leisure, awaiting retirement, and lack of flexibility and eagerness to act. Retirement frequently means actual drop in activity, withdrawal from life, commencement of the old age. One of the few "active" roles that such an image contains is the care for grandchildren and other members of the family. This, however, is also changing.

In the coming years, we can expect a gradual extension of the period of economic activity and delaying the average age of exit from the labour market (observed already since 2008). Most important, however, is the fact that the successive generations of Poles will enter the stage of old age with entirely different experience, possibilities, potential, and aspirations. A policy aiming at preparing our country to drastic changes in the age structure may not be addressed only to people 50+ and 60+, or any other isolated senior age category. From the point of view of today's policy, middle aged generations are very important. It is too late for a radical change of today's seniors. It is the manner and quality of ageing of today's middle-aged women and men, and especially the baby boom generations, that will be of key importance for the situation of our country in the coming decades.

One may not forget either about the changing situation of women and men. Levelling the age of retirement of men and women will be accompanied by a significant increase in the level of education of the ageing generations of women. They will still live longer than men. Will, however, there be no change in their lower involvement in professional life and lower level of remuneration observed today? This cannot be foreseen, yet we will certainly be witnesses of profound changes related to the situation and social roles of women.

One needs to remember that there is more around than the expanding period of professional activity. Still, the vast populations of the unemployed and inactive among the older generations remain a vast problem. In 2012, as many as 41% of people aged 50–59/64 were inactive. The share of long-term unemployed seeking employment (for over 12 months) reached as high as 66% of the unemployed in this age group. Finding employment at this age is extremely difficult, possibly with the exception of people with very high skills. For a vast proportion of the older people with lower education (who account for nearly 60% of people aged 50–59/64), loss of employment at 50 or over very often means the end of professional career. It is more difficult for such people to find employment due to the attitude of the employers who are not likely to employ older staff. One of the barriers in employment of older unemployed that are most often mentioned is the legally guaranteed four-year-long protection period before reaching the age of retirement [Szatur-Jaworska, 2008]. It discourages employers from employing people at this age, because the regulation has their hands bound: apart from exceptional circumstances, they cannot dismiss an employee covered by such protection. This is confirmed by the results of the BKL Study. Age was named a barrier in entering employment by nearly every other unemployed over 50. An especially high proportion of such indications was present in the age groups preceding and covered by the period of pre-retirement protection.

Closing, let's also ask a question about the role and activity of the state in the face of demographic changes in the labour market. Without doubt, the basic regulatory mechanism in the hands of the government in this case is the pension system. What remains an open question, in turn, is what actions should accompany its reform. Following the model of the demographically oldest countries, that already today experience problems that Poland must brace itself for, we can expect an increase in significance of certain areas of public policy. Besides the repeatedly mentioned shifting of the age of exit from the labour market, these include also helping the young to enter the labour market early, and support for immigration policy. Increasing the resources of workforce (in today's Poland, this is a question of marginal significance), and activation of the inactive population. Lifelong learning, which allows amending the adjustment of competency demand and supply in the labour market, will remain one of the basic areas of activity, and so will be the general idea of active ageing. In this context, the term "active" refers not only to the activity in

the realm of physical fitness and/or professional life. This is also educational, social, cultural, health-supporting, recreational, political, and neighbourhood activity. In the political world of few-year-long terms, the challenges of the future counted in decades have always been pushed to a more distant plane. Today, however, the gravity of threats resulting from the insolvency of the social system, powerfully exacerbated by the economic crisis and the high level of uncertainty concerning the development of global situation, should be sufficient for feeding imagination and motivating the decision-makers to take the necessary actions. It remains the citizens' task, in turn, to live and age in an active manner, which will provide the best investment in stable and peaceful future: of both the individual and the society we live in.

## **Summary**

## Chapter Four

*Magdalena Jelonek, Dariusz Szklarczyk*

# Upper secondary school leavers and HE graduates in the labour market

## Introduction

This chapter is devoted to the situation of young people (aged 30 and below) in the labour market, depending on the level and field of education. To be more precise, it is about the situation of the upper secondary school leavers<sup>53</sup> and HE graduates who entered the labour market during the last 10 or, in the case of graduates – 6 years<sup>54</sup> and did not continue formal education after leaving the school. The analysis of individual cohorts of leavers and graduates provides the main line of theses and conclusions formed in this chapter. It is preceded by the presentation of selected indicators related to the situation of secondary school leavers and higher education graduates in the labour market, which makes it possible to enter a broader debate concerning the situation of the young generation of employees and their market situation (*Diagnoza Społeczna 2011, Młodzi 2011, Raport o stanie edukacji 2011, Kontynuacja przemian*, and others). The current results are also supplemented with considerations of the level of impact of education on the professional career, which were presented in the report concluding the second round of the BKL Study [Turek, Czarnik, 2012].

So as not to repeat the conclusions stemming from the works mentioned above, we decided to focus especially on the analysis of divergences in the situation of the young in the labour market as far as the profile of education is concerned.<sup>55</sup> The data collected in the population study as part of the third round of

<sup>53</sup> Although the analyses conducted in this chapter concern also people who left the system of education before 2005 when the first students left upper secondary schools, we shall use the currently binding notion of “upper secondary schools” (Polish *szkoly ponadgimnazjalne*) because referring to general and technical upper secondary schools, postsecondary schools, and basic vocational schools we want to emphasise the variety of paths of education that these terms entail.

<sup>54</sup> Year 2011 was chosen for the starting point, which means that the study covered the situation of the graduates and leavers of 2001 and later annual cohorts (minimum one year after finishing formal education).

<sup>55</sup> In the case of upper secondary school leavers, the following definitions of education profiles are used: 1. General (general secondary) – school leavers from general upper secondary schools, 2. Specialised (specialised secondary) – school leavers from specialised upper secondary schools, 3. Vocational (post-secondary or other school), 4. Technical school leavers: technicians and other associate professionals – technicians and other associate professional titles acquired in upper secondary technical schools, 5. Technical (other occupations) – other occupations from the group of office and service jobs acquired at the upper secondary technical school, 6. Worker after a basic vocational school – skilled worker occupations acquired at basic vocational schools, 7. Other after a basic vocational school – jobs from the agriculture, operators and assemblers, and elementary occupations groups, 8. Services after basic vocational school – service jobs, after a basic vocational school. The groups of jobs are defined solely on the grounds of the ISCO-08 classification, for which reason, for example, the occupation of an “agricultural technician” is counted into the group Technical school leavers: technicians and other associate professionals, while an “office technician” – into the group. 5: Other/Technical (other occupations); moreover, the above does not account for passing vocational examinations.

the BKL made it possible to analyse the results gathered at two points in time: in 2011 and 2012,<sup>56</sup> and to examine the profile of education in greater detail than in the popular division into general and vocational education. Such an approach to the question is important for at least a number of reasons.

First, the phenomenon of rationalisation of choosing the path of education could be observed. This means, among others, an increased interest in the education of young people in technical and vocational schools in families of low and middle social status (although visible in general charts is a constant level, if not a slight drop, of enrolment to this type of schools). Selection of a school other than general secondary is among others connected to the search for a safer educational path that does not decide about the educational and professional future. [Młodzi, 2011, pp. 97–98]. The actual choice of the upper secondary school, however, enforces the belief that knowledge of the various paths of educational and occupational career and their consequences is insufficient or unavailable for the choosers. An example here is the situation of the school leavers educated in service occupations (e.g. cooks, hairdressers, sales workers) at basic vocational schools analysed in the further part of the chapter: this is the group that – of all the upper secondary school leavers – copes relatively most poorly in the labour market, yet this path still enjoys high popularity among young people choosing basic vocational schools [Jelonek, Szklarczyk, 2012a, p. 22].<sup>57</sup> The case is similar with higher education: visible here is an increase of interest in education in engineering specialties and, generally, in sciences [see: Jelonek et al., 2012], which on the one hand, proves an increase of rationalisation of educational decisions made at this level of education, and on the other – the efficiency of the campaign conducted by the Ministry of Science and Higher Education aimed at increasing the number of professionals in selected fields.

Secondly, a more careful study of the histories of people educated in individual types of schools may allow taking appropriate steps that will assure the inflow of specialists and professionals sought by the employers, and on the other hand – will improve the situation and the potential of these young candidates to work who experience problems entering the labour market. As the authors of the Social Diagnosis state, approximately 2 in 3 people unemployed because of shortages of skills required by employers have no more than occupational education. Every other person in this group is under 30, of which number 3 in 4 have not done anything to decrease the deficit of human capital and improve their qualifications. [Diagnoza, 2011, p. 149].

The chapter investigating the questions related to the position of upper secondary school leavers and higher education graduates in the market is split into two parts. The first provides a description of the labour market situation of young people without higher education, with special attention being paid to upper secondary school leavers. The second part focuses on HE graduates, and the main consideration concerns the situation of graduates of various fields of study (engineering/non-engineering, strategic/mass).

The structure of the two sections is similar, as they begin with short introductions presenting the general labour market situation of young people based on three types of variables, namely:

- the variable describing the labour market situation of graduates/leavers according to the BAEL approach (employed, unemployed, economically inactive)<sup>58</sup>
- the variable describing the labour market situation of graduates/school leavers in the context of form of employment (own enterprise, paid employment, unemployment, other form of employment, work without remuneration, other)
- the variable describing the net salary of graduates/leavers of selected types of schools and the wage-related aspirations of the unemployed.

<sup>56</sup> The results of two rounds of the study – 2010 and 2011 – were combined. Such a decision was made as the period between the studies was too short to treat it as significantly changing the labour market situation of the graduates/school leavers. This is why the first and second rounds of the study are treated as a simultaneous measurement.

<sup>57</sup> In the report quoted here, we mentioned a group of occupations popular at basic vocational schools, related to services, and giving a perspective for running own business. Possibly this perspective should be treated as a phantasm that “lures” a large share of students choosing basic vocational schools.

<sup>58</sup> The methodology of constructing this variable was drawn from the Labour Force Survey (BAEL) by the Central Statistical Office (GUS).

Further, a comparison of the situation of the selected groups of people leaving the system of education at a specific time (the so-called graduating cohort) in the labour market was made with the use of the variables listed above.

In the case of higher education, as a rule the data quoted concerns the last six annual cohorts leaving the institutions. Juxtaposition of information concerning the following graduating cohorts may be a complementation of the Central Statistical Office data published quarterly, describing the market situation of people leaving individual schools.<sup>59</sup>

The report ends in a conclusion comparing the labour market situation of upper secondary school leavers with HE graduates, attempting to answer the question whether continuation of education at higher level, as suggested by most studies [see: Harmon, Walker, 2000; Chevalier, Walker, 2001; Dearden et al., 2002; O'Leary, Sloane, 2011] is beneficial or does not change the labour market situation of the young, and also whether the rate of return from higher education is significant both during [see: Turek, Czarnik, 2012] and at the outset of the graduates'/school leavers' career.

It must be noted already in the introduction to the chapter that an analysis conducted in this way has certain limitations that should be honestly mentioned by its authors. First, as an attempt was made to control a large number of variables (cohort, year of study, and additional operands), the problem of small counts emerged in some analyses. The authors marked each such case within an asterisk or an explanatory footnote.<sup>60</sup> Secondly, as the questionnaire included no direct question about the year of completing education (in the case of people without higher education), this year had to be estimated.<sup>61</sup> Thirdly, as the questionnaire lacks questions monitoring the career path of graduates/leavers of various types of schools, and includes instead a question about the current labour market situation, the comparison of the situation in the case of individual cohorts required accounting for two factors: the economic situation when the cohort was entering the market, and the period from its emergence in the market to the day of the study. This problem significantly complicated the analysis, however, not becoming a factor that would render it impossible. The authors of the chapter tried to state clearly each case when a risk resulting from the reasons presented above influenced the conclusions.

## **1. Labour market situation of young people without higher education**

### **1.1. General description of labour market situation of young people without higher education<sup>62</sup>**

Before discussing the results related to the situation of individual cohorts of upper secondary school leavers (aged 30 and below) in the labour market, it makes sense to examine selected descriptions of the general situation of this group of people. The measurements made after a year show deterioration of conditions of the labour market, which is visible both in the dropping values of indicators concerning work (running own business, full-time and other paid work), and the increase of the percentage of the unemployed (Chart IV.1).

<sup>59</sup> The studies follow a somewhat different definition of a school leaver than in the case of the BKL: here, a school leaver is defined as a person aged 15–30 who finished school in the last 12 months before the study and is not continuing education [GUS, 2012].

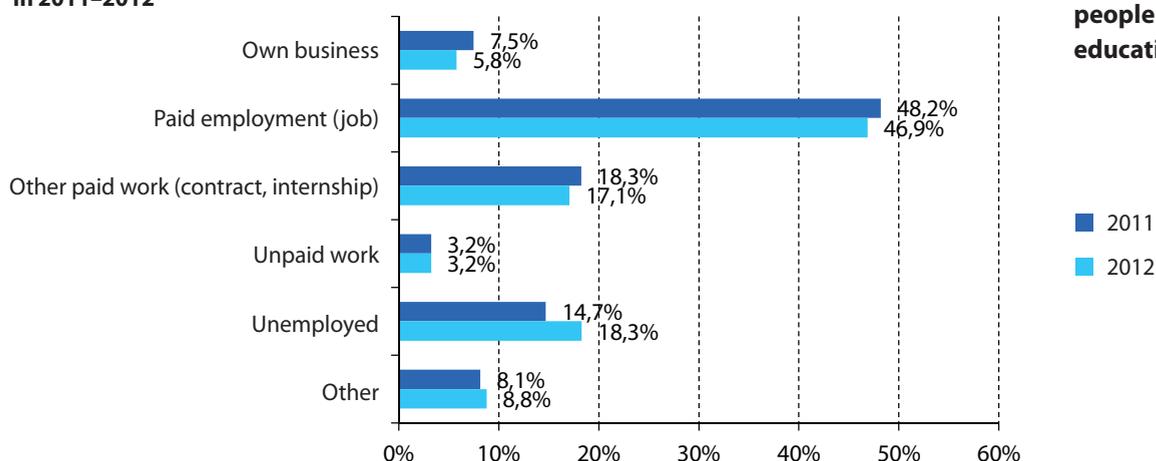
<sup>60</sup> For each comparison of small count groups, statistical significance was verified with appropriate nonparametric tests.

<sup>61</sup> The estimation had to assume a given number of years devoted to each stage of education. As can be guessed, in the case of selected respondents (e.g. repeating a year), the estimates may be understated.

<sup>62</sup> The analysis of "general situation" concerns people aged 30 and below without higher education, and therefore includes also people with primary and lower secondary education. They are, however, not included in all the remaining analyses that make use of the educational profile.

**Chart IV.1.**

**The labour market situation of the young (aged 30 and under) without higher education in 2011–2012\***



\*  $N_{2011}=4426, N_{2012}=2501$ .

Source: BKL – Population Study 2010–2012.

**General description of occupational situation of young people without higher education**

According to the definitions applied in the Labour Force Survey (BAEL GUS), the share of the working population dropped by 3.6 percentage points (from 62.6% to 59%), the share of inactive dropped by 1.9 percentage points (from 21.7% to 19.8%), and the share of the unemployed grew by 5.6 percentage points (from 15.6% to 21.2%). Also, the average net monthly salary dropped from PLN 1539 to PLN 1500 (median value), with simultaneous flattening of the level of income.<sup>63</sup>

An increase in the number of the unemployed affected men and women nearly to the same extent. The category of the “Employed” lost predominantly women in paid employment (Table IV.1). There is a regularity visible in the group in question, namely that men more often run own businesses, and are visibly more often in paid employment (jobs). In this group, more characteristic of women than men are other paid work, unemployment, continuing of education<sup>64</sup>, and homemaking, with the last two being the principal components of the category “Other”.

**Table IV.1.**

**Labour market situation of young school leavers without higher education in 2011–2012 (% in columns)**

Labour market situation	Men 2011 (N=2442)	Men 2012 (N=1415)	Women 2011 (N=1861)	Women 2012 (N=1023)	Men 2012–2011	Women 2012–2011
Own business	8.2%	6.8%	6.6%	4.4%	-1.4%	-2.2%
Paid employment (job)	54.9%	55.1%	39.4%	35.4%	0.3%	-4.0%
Other paid work (contract, internship)	17.6%	15.2%	19.1%	19.6%	-2.5%	0.6%
Unpaid work	3.1%	2.2%	3.4%	4.7%	-0.9%	1.3%
Unemployed	12.6%	16.4%	17.5%	20.9%	3.8%	3.5%
Other	3.6%	4.3%	14.1%	15.0%	0.7%	0.8%

Differences between women and men analysed at the same time are significant at the level of  $p < 0.05$ .

Source: BKL – Population Study 2010–2012.

<sup>63</sup> This is indicated by the values of the interquartile range and standard deviation, lower in 2012 than in 2011. In 2011, the average remuneration was PLN 1678, and in 2012 – PLN 1644.

<sup>64</sup> Although the investigations covered the situation of people who completed formal education at levels higher than lower secondary and do not continue it at the level of higher education, the declarations concerning their labour market situation included a small number of answers, suggesting continued education (possibly, in these cases the respondents were not capable of defining their labour market situation at the same time).

Such evident differences in the situation of young women and men in the labour market are in line with the previously acquired results, which proved that, besides the categories of professionals, clerical support workers, and sales and services, that is on the positions that do not require higher education, men are the preferred candidates to work [see: e.g. Jelonek et al., 2012, p. 33].

## 1.2. General description of the labour market situation of upper secondary school leavers

Moving to the main claims of the chapter, attention must be drawn to the differences in the labour market situation of students completing various paths of education at upper secondary level (Table IV.2). The most important conclusions are:

1. In the case of both general and specialised secondary school leavers, a higher share of the inactive than in the remaining groups is visible, which in this case most often results from managing the household, and less often from continuation of education. The percentage of the working school leavers (according to BAEL) slightly exceeds 60%, and is lower only in the case of the students who completed education in service courses at basic vocational schools. According to the median value, those who completed education in general schools also belong to the groups with relatively lowest monthly salaries. It can be stated that – from the perspective of the labour market – the lack of decision about continuing education (available at higher level) may be most agonising for this group. The model option of opting for a general school in upper secondary education should entail continuation of education at the higher level, for which reason the labour market situation of general secondary school leavers who do not continue education should not have a bearing on the general picture of leavers of this type of school.
2. A group with a conspicuously high percentage of working people, relatively low share of the unemployed and the inactive, and the relatively highest salaries consists of people leaving technical secondary schools as technicians and school leavers with the title to perform other associate professional jobs. It is important, as leavers of other courses offered by secondary technical schools are visibly more poorly positioned, when it comes both to employment and salaries.
3. Basic vocational school leavers in worker courses of education form the group that ranks second in the value of monthly salary. Yet the attractiveness of this path is tainted by the fact that this is the group with the largest percentage of the unemployed. This may be connected to the major internal variety in the group, which includes both occupations sought in the labour market and “dying” ones. [see: Jelonek et al., 2012, pp. 58–59]. Those who selected other (but not “service-related”) paths of education at basic vocational schools are relatively less often unemployed, but also they are relatively more often inactive and feeding the NEET (i.e. Not in Employment, Education or Training) category, which – as studies prove – threatens with a lasting loss of connection with the labour market [Młodzi, 2011, p. 149]. At the same time, representatives of this group earn slightly less than skilled workers.<sup>65</sup>
4. A visible outlier is the group whose situation in the labour market must be most difficult, namely, basic vocational school leavers in service jobs (e.g. cooks, hairdressers, sales personnel). As has been mentioned, their situation is a reason for concern as far as these are the jobs that have been highly popular, with the popularity continuing at a more or less stable level in the recent years. Significantly, these courses provide education mostly to women. [Jelonek, Szklarczyk, 2012a, p. 32]. Characteristic of this group is the lowest share of the employed (as throughout the group covered by the study it does not exceed 53% for any of the jobs listed), and a high percentage of the unemployed (for example: cooks – 23%, hairdressers – 20%), and the highest percentage of the inactive (reaching 30%, and in the case of salespeople – 33%) among the upper secondary schools analysed. The monthly salaries in this group are by over PLN 250 lower (median value) from the total average, and compared to the best earning group of technicians – by nearly PLN 430. Moreover, they are hardly differentiated. It must, however, be remembered that the service jobs quite often operate in the underground section of national economy. Therefore, in the case of the group of occupations in question, the actual occupational and material situation of some school leavers in this group may actually be better than the results of the studies show.

**Table IV.2.**

**Labour market situation of leavers of various paths of education in upper secondary schools in Poland (not continuing education at higher level)**

**General description  
of the occupational  
situation of upper  
secondary school  
leavers**

Education profile	N	Working (BAEL)	Unemployed (BAEL)	Inactive (BAEL)	Net salary median	Net salary average	Statistical deviation	N (salary)
General (general secondary)	1235	60.9%	16.2%	22.9%	1500	1684	1068	555
Specialised (specialised secondary)	516	63.5%	16.4%	20.1%	1441	1569	1233	247
Vocational (postsecondary or other school)	374	69.7%	13.6%	16.7%	1497	1802	2486	180
Technical (technicians and other associate professionals after technical schools)	1404	74.4%	14.0%	11.7%	1710	1859	1517	715
Technical (other occupations)	386	66.5%	17.5%	16.0%	1539	1680	891	204
Worker after a basic vocational school	1034	68.3%	19.3%	12.4%	1642	1783	1013	512
Other after basic vocational school	222	68.7%	12.8%	18.5%	1604	1759	939	92
Services after basic vocational school	633	52.3%	18.3%	29.3%	1283	1386	996	271
<b>Total</b>	<b>5804</b>	<b>66%</b>	<b>16.2%</b>	<b>17.8%</b>	<b>1539</b>	<b>1718</b>	<b>1321</b>	<b>2777</b>

Results for the combined samples from 2010, 2011, and 2012.<sup>66</sup>

Differences between profiles of school leaver education concerning the percentage of the employed, the unemployed, and the inactive populations are significant at the level of  $p < 0.05$ . The differences in median salaries, significant at the level of  $p < 0.05$ , are provided for individual education profiles in the Annex.

The values "N" and "N (salary)" differ due to the shortage of data resulting from the lack of answers to the question about the salary.

Source: BKL – Population Study 2010–2012.

In the face of an economic crisis, also the access of young staff to good, stable jobs (as opposed to temporary employment, and other agreements) became the subject of a debate. It is discussed both in the context of flexible forms of employment providing "a bridge" facilitating entry into the labour market, going out of unemployment, and giving an opportunity to seek ever better conditions of work [*Diagnoza Społeczna*, 2011, p. 135], and also clearly visible duality of the labour market, as it falls into the market of salaried employers with a specified path of promotion and pay rises, and the market of temporary workers, featuring a lack of stability and clearly defined career paths [*Młodzi*, 2011, p. 169]. An analysis of the labour market situation of upper secondary school leavers points to the fact that leavers of technical schools in technician and associate professional occupations are the ones who can count most on stabilisation (the relatively highest share of paid employment, low share of those in non-job employment, and low share of the unemployed) – which is of course true about those who did not opt for running their own business (Table IV.3). Yet also in the latter case, the highest share of business owners points indirectly to the fact that representatives of this category have at their disposal such human capital that is necessary to cope in difficult conditions prevalent in the labour market. Similarly, the postsecondary school leavers are in a relatively good situation, although characteristic of them is the highest share of those having other paid work. Conclusions concerning the unfavourable labour market situation of basic vocational school leavers who took courses in the services are aggravated. Characteristic of this group is both the lowest share of job holders (40%) and the highest percentage of the unemployed (20%).

<sup>66</sup> As the analysis emphasises primarily the differences between the individual profiles of education (which did not undergo major changes in the period of time in question), and also due to the need for ensuring appropriate counts, a decision was made to present results for the combined samples from the successive rounds of the study (2010, 2011, 2012) in tables IV.2 and IV.3.

**Table IV.3.**

**The labour market situation of upper secondary school leavers following various paths of education in Poland (not continuing education at higher level, accounting for the form of work; % in rows)<sup>67</sup>**

Profile of education	N	Own business	Paid employment (job)	Other paid work (contract, internship)	Unpaid work	Unemployed	Other	Total
General (general secondary)	1235	5.3%	47.0%	17.4%	2.6%	16.9%	10.7%	100.0%
Specialised (specialised secondary)	516	9.5%	48.6%	18.4%	3.9%	12.6%	7.0%	100.0%
Vocational (postsecondary or other school)	374	7.0%	57.0%	19.8%	1.6%	10.4%	4.3%	100.0%
Technical (technicians and other associate professionals after technical schools)	1404	11.3%	57.9%	13.2%	4.1%	10.7%	2.8%	100.0%
Technical: other occupations	386	6.2%	54.9%	17.1%	2.6%	12.7%	6.5%	100.0%
Worker after a basic vocational school	1034	7.0%	56.7%	13.2%	2.6%	17.0%	3.6%	100.0%
Other after basic vocational school	222	6.3%	54.5%	15.8%	3.2%	14.9%	5.4%	100.0%
Services after basic vocational school	633	5.5%	40.1%	17.9%	3.5%	20.2%	12.8%	100.0%
Total	5804	7.7%	52.2%	15.8%	3.1%	14.6%	6.5%	100.0%

Results for combined samples 2010, 2011, 2012.

Differences between profiles of education are significant at the level  $p < 0.05$ .

Source: BKL – Population Study 2010–2012.

Just the presentation of the total results for the combined samples makes us aware that while investigating the situation of secondary school leavers in the labour market, it is necessary to conduct the analysis at a level of detail higher than just the standard differentiation into general and vocational education. The analysis will acquire a greater significance once a greater number of young people have made a decision to choose a school providing a specific field of education, while going into secondary education.

In the further part, we proceed to more detailed analyses, taking a closer look at the labour market situation of the successive upper secondary school leaver cohorts – from 1 to 10 years from completing formal education.

### 1.3. Changes in the labour market situation of the successive school-leaving cohorts without higher education (in this, secondary school leavers)

The results presented below account for the changes in the situation of individual annual cohorts, which took place between the first (2011) and second (2012) moment of collecting data. The analysis covered the situation of students who left school in 2001 and later, which – counting from 2011, and assuming at least one year's period of contact with labour market – means accounting for people in contact with the labour market for a period from 1 to 10 years (at the same time meeting the condition of being aged 30 or less). The perspective of various paths of education in upper secondary education assumed due to the limited volume of data, did not make it possible to perform a separate analysis for each graduating cohort

<sup>67</sup> The data in Table IV.3 come from the declarations of the respondents who finished formal education, and concern their labour market situation. The situation resulting from their declarations may differ from the situation defined in BAEL definition, which is visible, e.g. in the differences in the share of the unemployed.

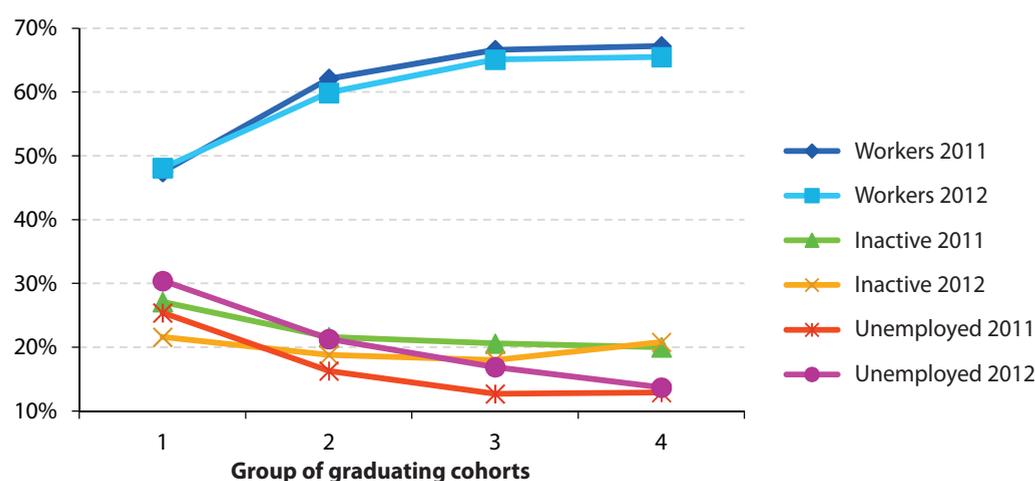
so that their aggregation became necessary. Combining individual cohorts, we follow similar economic<sup>68</sup> conditions in the labour market in individual years. Beginning with 2001, this allowed to elicit four groups of annual cohorts: (1) 2009–2011, (2) 2006–2008, (3) 2003–2005, and (4) 2001–2002. For that reason, for the first time of analysis (2011), the study covered people who were school leavers (1) from 1 to 2 years, (2) 3–5 years, (3) 6–8 years, (4) 9–10 years, and for the time of the second analysis (2012) – people being school leavers: (1) from 1 to 3 years, (2) 4–6 years, (3) 7–9 years, and (4) for 10 years.

### 1.3.1. Description of economic activity of school leavers without higher education in successive groups of graduating cohorts

Generally, the employment rate (i.e. the percentage of the working people) grows fastest – from a level below 50% to 60% – between the first and the second multi-annual cohorts. This means that the largest increase in the percentage of the employed young people without higher education can be observed within 2 or 3 years from entering the labour market. For the oldest cohorts, this rate increases more slowly, and remains at a more or less uniform level of approximately 65%. At the same time, the percentage of the unemployed drops (by approximately 10 percentage points) and, which could be expected, so does the percentage of the inactive, though somewhat more slowly. Importantly, the further drop in the share of the unemployed may be observed with time.

#### Chart IV.2.

**Share of the employed, the unemployed, and the inactive (according to BAEL) in the individual young school-leaver cohort groups without higher education**



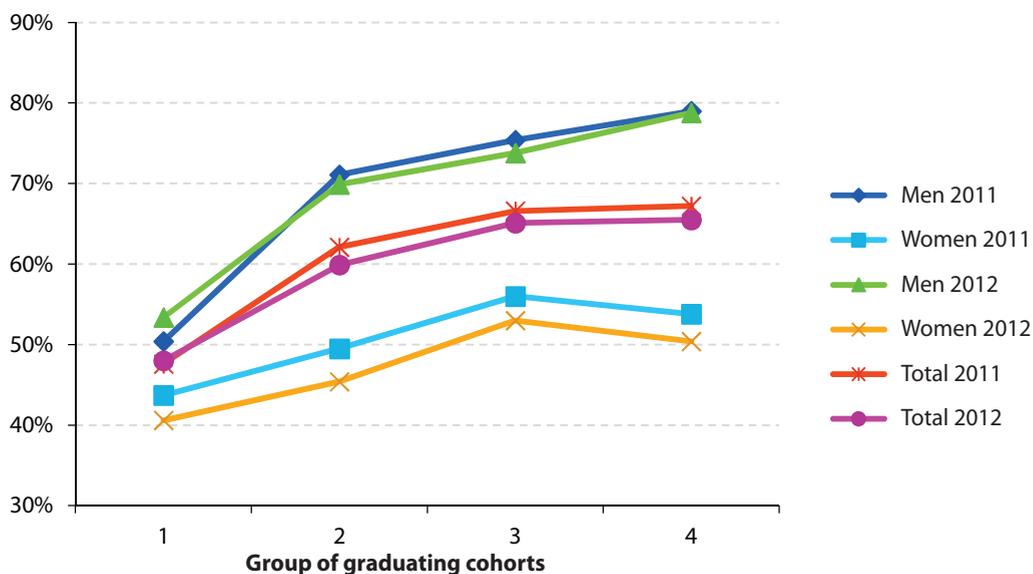
Source: BKL – Population Study 2010–2012.

Employment rates are not only much higher for men than for women, but they also grew far faster in the successive years in the labour market (especially fast in the initial years: the difference between the group 1 and group 2 in the case of men reaches 20 percentage points). Moreover, visible in the case of women is the negative fluctuation of growth of the percentage of the employed in the last cohort group. Compared to 2011, the difference at “the starting point” of employment between men and women increased in 2012 (from 7 to 13 percentage points).

<sup>68</sup> This accounts for: employment rate, unemployment rate (BAEL), unemployment rate for people aged from 15 to 24, average annual rate of GDP growth, and efficiency of work per employee (see: Table A2 in the Annex).

**Chart IV.3.**

Percentage of working women and men in individual young school-leaver cohort groups without higher education<sup>69</sup>

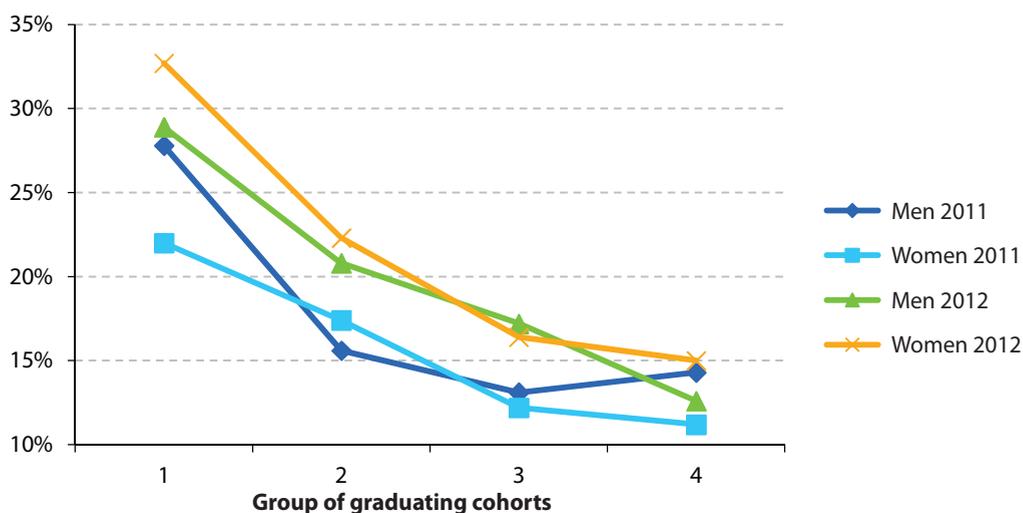


Source: BKL – Population Study 2010–2012.

Another reason for concern is the sudden increase in the percentage of the unemployed women in the most recent (according to the experience in the labour market) group of school leaver cohorts. Compared to 2011, in 2012 it grew by nearly 11 percentage points, i.e. to the level of nearly a third of the total of women in this group. In the same period, for the men from the group 1, it remained at a nearly unchanged level (approx. 20%), while in 2012, the share of the unemployed men was falling more slowly (group 2 compared to group 1). This means relatively greater difficulties for female school leavers to find employment as compared to the situation in 2011.

**Chart IV.4.**

Percentage of the unemployed women and men in individual young school-leaver cohort groups without higher education<sup>70</sup>



Source: BKL – Population Study 2010–2012.

<sup>69</sup> Differences between women and men are significant at the level of  $p < 0.05$ .

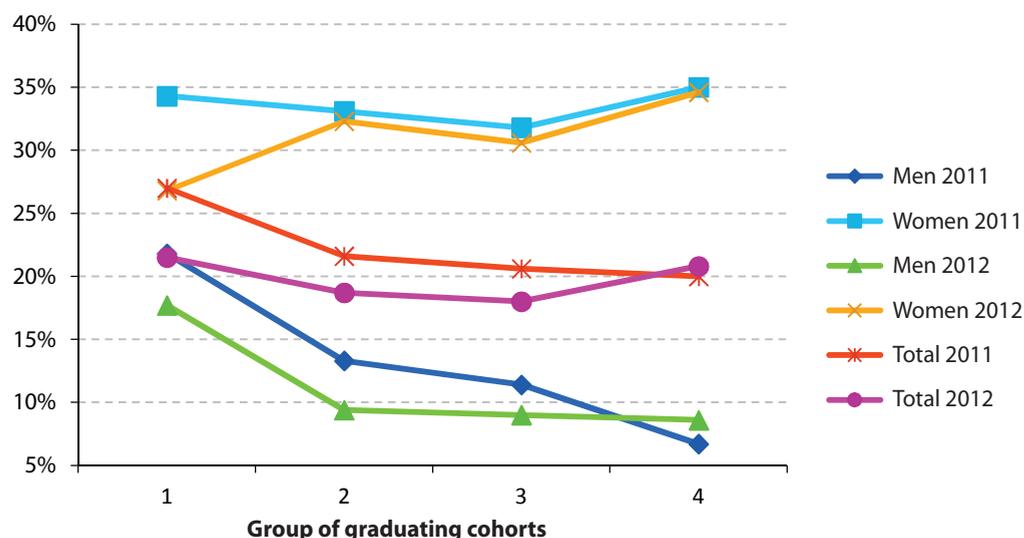
<sup>70</sup> Differences between women and men are significant at the level of  $p < 0.05$ .

At the same time, the percentage of inactive women and men dropped (especially in group 1). It is clearly visible here that the dynamic of the drop in the proportion of the (total) number of the inactive parallel with the increased history in the labour market is smaller than the dynamic of the drop of the proportion of unemployed in time. This is a hint that suggests treating these groups of school leavers separately, as the unemployed demonstrate an active approach to finding employment and readiness to start working. Quoted earlier, the Młodzi 2011 report speaks clearly about the presence of mechanisms demotivating young people prepared to work to the actual work, e.g. by offering employment below the candidates' abilities, and building obstacles for young women to enter the market. [Młodzi, 2011, p. 150].

**Changes in the occupational situation of the successive classes of school leavers without higher education (in this, secondary school leavers)**

**Chart IV.5.**

**The percentage of inactive women and men in individual young school-leaver cohort groups without higher education<sup>71</sup>**



Source: BKL – Population Study 2010–2012.

At the same time, analysing the statistics related to the lower employment rate and higher rate of inactive young women, one needs to remember the differentiation of men's and women's professional careers related to starting the family, childbirth and childcare.

**1.3.2. Description of economic activity of upper secondary school leavers in the successive groups of graduating cohorts**

Table IV.4 contains the presentation of results concerning the labour market situation of upper secondary school leavers in the labour market (according to BAEL) for individual cohort groups. In the columns, the percentage of the employed, the unemployed, and the inactive for the given cohort group and the year of the study sums up to 100. The main object of interest are the differences in the situation of school leavers in individual paths of education, which is why the rows are most important for comparison purposes.

<sup>71</sup> Differences between women and men are significant at the level of  $p < 0.05$ .

Upper secondary school leavers and graduates of institutions of higher education in the labour market

Table IV.4.

Labour market situation of school leavers in various paths of education in upper secondary schools, broken down by cohort groups, and the year of the study

Value	Group	Profile of education								Total
		General (general secondary)	Specialised (specialised secondary)	Vocational (postsecondary or other school)	Technical (technicians and other associate professionals after technical schools)	Technical: other occupations	Worker after a basic vocational school	Other after basic vocational school	Services after basic vocational school	
N 2011	1	170	43	37	159	37	89	21	72	628
	2	245	83	99	267	96	143	20	84	1037
	3	230	141	112	308	85	234	50	149	1309
	4	120	75	**13	190	37	172	41	84	732
N 2012	1	138	32	28	147	44	77	**13	53	532
	2	126	57	46	152	33	81	**19	60	574
	3	123	45	55	151	53	98	28	56	609
	4	48	**15	No data	57	**18	57	**6	47	248
% of the working in 2011	1	42.4%	44.2%	48.6%	59.7%	51.4%	59.6%	66.7%	40.3%	50.8%
	2	65.3%	67.5%	70.7%	76.0%	67.7%	66.4%	60.0%	50.0%	67.8%
	3	69.6%	65.2%	80.4%	76.9%	72.9%	73.1%	70.0%	59.7%	71.5%
	4	63.3%	66.7%	92.3%	79.5%	75.7%	69.8%	78.0%	51.2%	69.9%
% of the working in 2012	1	42.0%	56.3%	46.4%	65.3%	52.3%	50.6%	61.5%	47.2%	52.6%
	2	62.7%	70.2%	58.7%	75.7%	66.7%	71.6%	68.4%	50.0%	66.9%
	3	67.5%	62.5%	76.4%	81.5%	73.6%	69.4%	53.6%	57.1%	70.6%
	4	66.7%	66.7%	No data	75.4%	66.7%	63.2%	100.0%	61.7%	67.7%
% of the unemployed in 2011	1	21.2%	44.2%	27.0%	25.2%	35.1%	28.1%	9.5%	30.6%	26.6%
	2	12.2%	16.9%	12.1%	9.7%	14.6%	21.7%	30.0%	22.6%	14.7%
	3	12.6%	13.5%	5.4%	10.7%	8.2%	12.8%	8.0%	10.7%	11.0%
	4	12.5%	9.3%	0.0%	8.9%	8.1%	13.4%	9.8%	13.1%	10.9%
% of the unemployed in 2012	1	33.3%	25.0%	28.6%	25.9%	36.4%	44.2%	7.7%	28.3%	31.2%
	2	19.0%	14.0%	28.3%	17.1%	18.2%	19.8%	15.8%	15.0%	18.3%
	3	13.8%	13.3%	7.3%	9.9%	15.1%	19.4%	17.9%	21.4%	14.1%
	4	10.4%	13.3%	No data	8.8%	11.1%	19.3%	0.0%	8.5%	11.7%
% of the inactive in 2011	1	36.5%	11.6%	24.3%	15.1%	13.5%	12.4%	23.8%	29.2%	22.6%
	2	22.4%	15.7%	17.2%	14.2%	17.7%	11.9%	10.0%	27.4%	17.6%
	3	17.8%	21.3%	14.3%	12.3%	18.8%	14.1%	22.0%	29.5%	17.5%
	4	24.2%	24.0%	7.7%	11.6%	16.2%	16.9%	12.2%	35.7%	19.1%
% of the inactive in 2012	1	24.6%	18.8%	25.0%	8.8%	11.4%	5.2%	30.8%	24.5%	16.2%
	2	18.3%	15.8%	13.0%	7.2%	15.2%	8.6%	15.8%	30.5%	14.8%
	3	18.7%	24.4%	16.4%	8.6%	11.3%	11.2%	28.6%	21.4%	15.3%
	4	22.9%	20.0%	No data	15.8%	22.2%	17.5%	0.0%	29.8%	20.6%

Asterisks mark small counts: thus marked series of results must be interpreted with care. For the remaining series of results, differences are significant at the level  $p < 0.05$ . Grey font denotes % values based on small counts.

Conclusions from the analyses are discussed below for each individual path of education separately:<sup>72</sup>

**Changes in the occupational situation of the successive classes of school leavers without higher education (in this, secondary school leavers)**

### 1. General secondary school leavers<sup>73</sup>

Considering the employment rate, they “start” from a low level (42% of employed among the school leavers with the shortest experience in the labour market), which initially puts them in a situation comparable to that of the basic vocational school leavers in service courses. Characteristic for the group 1 is the highest share of the inactive (especially in the 2011 study), which drops in 2012, with a parallel sharp increase in the number of the unemployed. The “leap” in the proportion of employment that takes place between group 2 and 1 in the successive cohort groups is comparable to the “leap” of school leavers on the remaining paths (approx. 15 percentage points), yet with the “starting point” situated fairly low, so they cannot catch up with the groups with the highest share of the employed. To sum up, situation of this category of school leavers in the labour market is rather unfavourable compared to the remaining ones, and proves a tendency to deteriorate (a greater proportion of the unemployed in 2012, decreasing at a lower pace in the successive cohort groups). A natural course for increasing the opportunities of this category of school leavers in the labour market is to enter higher education.

### 2. Specialised secondary school leavers

Their situation is most akin to that of the general secondary school leavers (with the employment rate in fact not exceeding two thirds in each graduating cohort), although certain differences emerge. First, in 2011, they featured a twice higher rate of the unemployed in group 1, which, however, clearly decreased in the successive cohort groups. At the same time, the school leavers in this category were more than three times less inactive than group 1 students who left general schools (with the percentage, however, growing in each successive cohorts group). Secondly, in the study conducted in 2012, the situation was better than that of general secondary school leavers in fact according to the all metrics in question, and in nearly all groups. Yet the results of the 2012 study must be approached with care, due to the lower counts. Summing up, with the exception of the greater probability of starting their own business, visible in Table IV.3, in this category of school leavers there are no visible reasons why this path could be highly competitive towards those obtaining the best results. Assessment of this category of schools after over a decade of operation can be found in various works, is strongly negative, and leaves no room for illusion: people leaving schools of this type were insufficiently prepared to enter higher education and/or to start work [*Raport o stanie edukacji*, 2011, p. 23].

### 3. Postsecondary and other vocational school leavers (not higher education)

Although employment rate for group 1 in this category is only slightly higher than in the case of all school leavers, with extending experience in the labour market, people in this category make a vast “leap” rating (group 2 and above) among the categories with highest employment rates, and lowest proportion of the unemployed and inactive (nevertheless, the results of the 2012 study must be approached with certain caution). After six years in the labour market, more than three in every four school leavers in this category were employed in the period in question. Described earlier, the large dynamic of opening and closing postsecondary schools, and the courses of education they offer [see: Jelonek, Szklarczyk.2012b, p. 177] can be treated as an attempt at a flexible reaction to the needs of the labour market. This, however, does not explain why school leavers *en masse* found employment only a few years after leaving such school (with a rapidly dropping share of the unemployed in this category). Once a greater volume of data has been gathered, it will be worthwhile to take another look at this path of education, especially in its capacity of a faster alternative to higher education.

<sup>72</sup> Examining the investigations in this section of the chapter, it is good to remember the data that prove segmentation of upper secondary education, broken down by sex, as described earlier. [Jelonek, Szklarczyk, 2012a].

<sup>73</sup> These analyses concern all those who finished education at a specific level.

#### *4. Technical school leavers: technicians and other associate professionals*

The analysis of the market situation of the successive school-leaving cohorts in this category may be most encouraging for people considering a path of education other than studies. The first attraction is the fact that the employment rate among this category of school leavers reaches and even exceeds the threshold of 60% already among those staying in the labour market from 1 to 3 years, and therefore is by approximately 10 percentage points higher than the result for the entire group 1. Secondly, in the successive years, this category is accompanied by a regular increase of employment rate, even to a level exceeding 80%. Thirdly, the share of the unemployed in this category, compared to the remaining ones, is among the lowest in the group 1, and shows the most evident drop in the successive cohort groups, below the level of 10% (in this respect, this category of school is matched only by the postsecondary school leavers). Fourthly, of all the categories analysed, this one features the lowest share of the inactive. Combining this with the already quoted information about the more frequent cases of starting own enterprises, relatively high share of job holders, and relatively highest salaries, those interested in secondary technical education may be encouraged to select this path of education from the perspective of the students who followed it and are now within the first 10 years from finishing education.

#### *5. Technical school leavers: other occupations*

Worth clear emphasising is the fact that from the point of view of the situation of school leavers in the labour market, it makes no major sense to treat the path of education in technical secondary schools as uniform. However, all things considered, this category of school leavers cope better in the labour market than general, specialised, and basic vocational school leavers, yet compared to the category of technicians and other associate professionals, they begin from “a lower level” of employment and reach higher employment rates more slowly. Visibly more often, especially in group 1 (of fresh school leavers), they have the status of the unemployed, with the percentage of the inactive also being higher in this category. The results between the first and the second point of the study do not diverge significantly, yet the results from 2012, due to the low count, need approaching with care. To sum up: against the other paths in secondary school education, this one looks fairly well, on condition that you are patient and ready for a difficult start of your adventure with the labour market.

#### *6. Skilled worker occupations after a basic vocational school*

Three things require attention in this category of school leavers. First, the employment rates look very well here, especially in the 2011 study. The situation of the school leavers in group 1 in this category is close to that of people who left technical schools having completed technical and associate professional courses, and in the successive groups, the share of the employed exceeds 70% (although in the 2012 study, there is a decline visible in group 3). Moreover, this is the category with the relatively lowest share of the inactive (although it grows in the two groups most experienced in the labour market). Secondly, especially against the background of the general, post-secondary, and technical education, a slower fall in the percentage of the unemployed is visible, which signifies difficulties in finding work, extending to a level dangerous for the professional career. A comparison of employment and unemployment rates in the analysed cohort groups pointed to a “split” in this school leaver category into those who have quite a high probability of employment already at the start of their adventure with the labour market, and those whose situation is unfavourable. As already mentioned, this may result from the presence of courses in jobs in high demand and ones disappearing from the labour market being offered at basic vocational schools. Thirdly, compared to the study of 2011, the share of the unemployed in this category grew in 2012 (especially significantly in group 1). This may point to additional difficulties faced by the unemployed in this category during an economic crisis. Concluding, the selection of a worker occupation after basic vocational school does not have to be a bad choice; it just needs careful consideration, and taking into account future as well as current demand for the specific occupation in the labour market.

### *7. Basic vocational school leavers: other non-service occupations*

Distinctive for the results in this category is high irregularity, which is most probably caused by the low count of observations characteristic of this group of school leavers. Although this renders interpretation more difficult, it is worth emphasising the justification of distinguishing this group against basic vocational school leavers in worker and service courses for the future analyses, based on greater volumes of data. This group includes, among others, operators and assemblers, including drivers and vulcanisers, who – as the studies show – are sought by employers in the labour market [see: Jelonek et al., 2012, p. 27]. In the case of the first study (with greater counts), it is worth paying attention to the highest percentage of the employed in the group 1 than in the remaining categories of upper secondary school leavers. The employment rate does not fall below 60% also in the other age groups. Besides the instability in group 2, also the unemployment rates in this category must be considered low. The percentage of the inactive is too unstable to be interpretable with the current amount of data. Certainly, also this path of education offers occupations that are desired by the labour market, and guarantee employment. Attention is paid among others to the development of the transport sector, and increased demand for drivers, deliverers, and couriers, which is caused by the expansion of the online sales sector. Time will show whether the reformed vocational schools will be able to provide appropriate qualifications to people who finished such courses.

### *8. Basic vocational school leavers: service occupations*

Much has already been said about this category – exceptional and noticeable in the labour market, unfortunately in the negative sense of the word. The results gathered in Table IV.4 portray the volume of the deviation from the remaining categories in question. Low employment rates, growing slowly with the increasing experience in the labour market, relatively high and slowly decreasing unemployment rates, and the highest proportion of the inactive becoming a reason for concern are the main features of this category. As has been mentioned before, this situation is most often true in the case of young women working as cooks, hairdressers, and salespeople. In their case, a frequent decision (or perhaps the result of unfavourable circumstances?) is withdrawal from the labour market for the sake of homemaking. The key to an appropriate interpretation of the situation would be a credible investigation of the motivation of people selecting this path of education. Obviously, it would be better if the unfavourable labour market situation were a follow-up or conclusion of a more or less conscious choice of the walk of life rather than a fact hitting like an iceberg against a ship whose manoeuvrability had been strongly curtailed. These conclusions are in fact not influenced by the aforementioned probability that a significant share of this group of school leavers operate in underground economy.

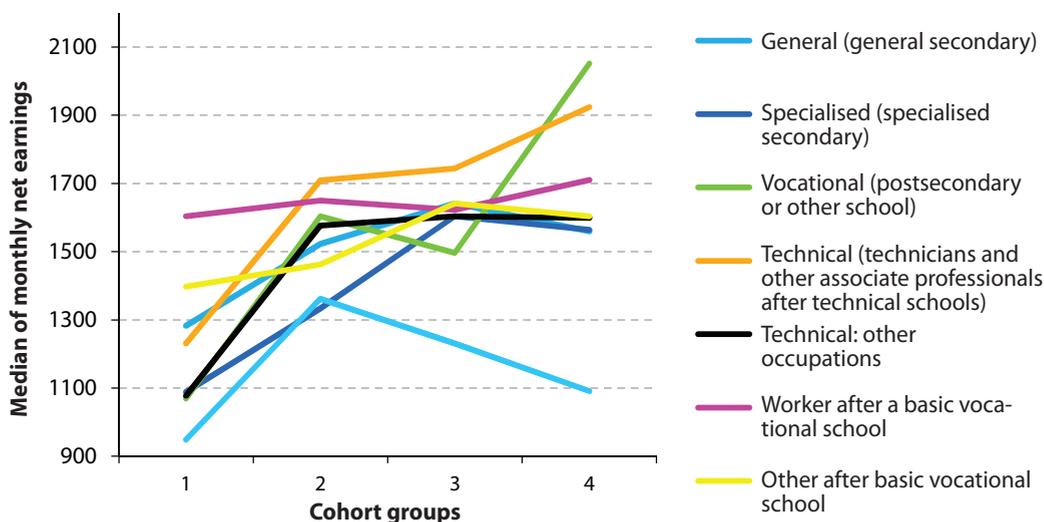
## **1.4. Earnings of working school leavers without higher education vs. wage aspirations of jobseekers**

The conclusions presented above can be complemented with an analysis of differences in the earnings of school leavers, broken down into individual paths of upper secondary education acquired from 1 to 10 years since entering the labour market. Much like above, also here the graduating cohorts were combined into four groups. The analysis covers the declared monthly net salaries according to the median value for the education profiles in question

## **Earnings of working school leavers without higher education vs. wage aspirations of jobseekers**

Chart IV.6.

Monthly net earnings median for successive groups of leavers of secondary schools in 2011<sup>74</sup>



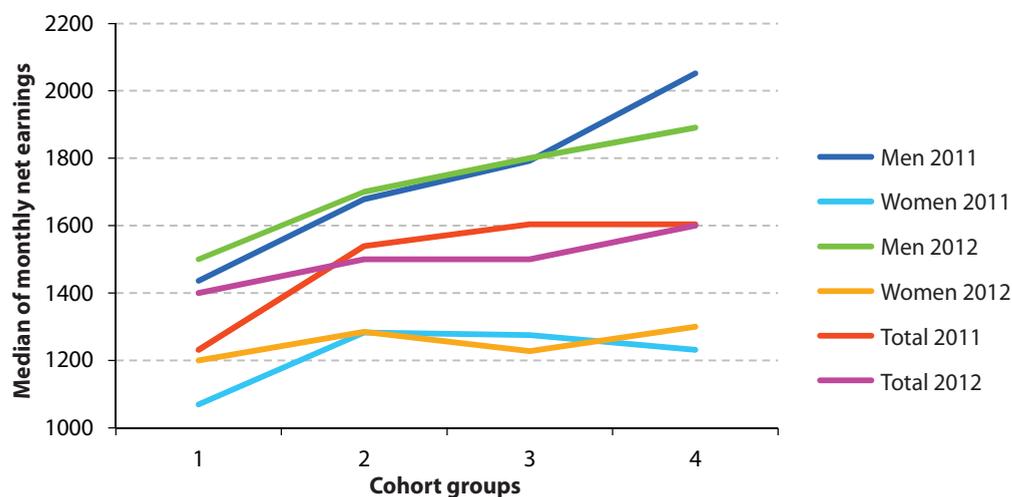
Source: BKL – Population Study 2010–2012.

As far as earnings are concerned, in the data from 2011 the “starting point” of basic vocational school leavers in the worker occupation category is interesting (Chart IV.6), as it is much higher than in the case of the remaining ones (approx. PLN 1600 net). In the successive cohort groups, remaining longer in the labour market, this income remains at a more or less stable level. In the case of the other education profiles, a more or less dynamic growth of revenue in the successive groups is visible, with the “starting point” being situated at a lower level. Between groups 1 and 2, that is in the period from 1 to 6 years in the labour market, most dynamically growing is the remuneration of the technical school leavers, with the salaries reaching higher level in the case of technical and other associate professional occupations. In the case of the cohorts remaining even longer in the labour market (from 7 to 10 years), there is a visible “slow down” in the increase of revenue, which remains higher among the postsecondary and other school leavers. The salaries of general secondary school leavers “grow” more slowly than in the case of leavers of technical schools. The lowest curve reflects the situation of basic vocational school leavers in service occupations: they earn least, and, after an initial increase, their salaries drop.

Due to the small volume of data, no statistically significant differences in the income median were found in the study conducted in 2012. In turn, comparing the salaries of women and men without higher education, the poorer situation of women becomes clearly visible (Chart IV.7).

**Chart IV.7.**

**The monthly net earnings median for successive groups of male and female school leavers without higher education<sup>75</sup>**



Source: BKL – Population Study 2010–2012.

First, men earn more than women, irrespective of the time from the formal completion of education (on completing education, men earn more than women with a few years' (even up to 10) experience. Secondly, an increase of average remuneration, even to a level exceeding PLN 2000 net, is visible in men, parallel to the growing experience in the labour market. At the same time, the remuneration of women grows in a highly limited scope, and on average practically does not exceed the level of PLN 1300 during 10 years of work.

An analysis of remuneration-related aspirations of secondary school leavers seeking work studied at two points in time leads to interesting conclusions (Table IV.5). In most categories analysed, the expectations concerning both the value of the lowest remuneration in return for which they would be likely to start work (1), and the value of the remuneration they would consider satisfactory (2) are growing. The exception here are the technical school leavers who decreased their remuneration-related expectations in 2012, as compared to 2011. The drop in the average is accompanied by the decrease of values of standard deviation and coefficients of variation, which denotes a greater "unanimity" in this area.

**Earnings of working school leavers without higher education vs. wage aspirations of jobseekers**

<sup>75</sup> Differences between women and men, studied at the same point in time, are significant at the level of  $p < 0.05$ .

**Upper secondary school leavers and graduates of institutions of higher education in the labour market**

**Table IV.5.**

**Remuneration-related aspirations of upper secondary school leavers seeking work in 2011 and 2012<sup>76</sup>**

Profile of education	N(1) 2011	N (2) 2011	Average (1) 2011	Stat. dev. (1)	Average (2) 2011	Stat. dev. (2)	N (1) 2012	N (2) 2012	Average (1) 2012	Stat. dev. (1)	Average (2) 2012	Stat. dev. (2)
General (general secondary)	171	184	1489	519	1981	699	146	147	1606	580	2171	861
Specialised (specialised secondary)	100	100	1493	437	1961	565	49	49	1675	618	2487	1996
Vocational (postsecondary or other school)	67	70	1598	570	2097	653	45	45	1637	659	2079	750
Technical (technicians and other associate professionals after technical schools)	190	197	1711	1108	2284	1460	125	125	1597	443	2133	754
Technical: other occupations	74	75	1639	566	2143	718	44	44	1483	341	2017	789
Worker after a basic vocational school	173	175	1640	567	2175	815	120	120	1689	481	2246	692
Other after basic vocational school	20	21	1614	404	2046	549	15	15	2024	708	2442	742
Services after basic vocational school	100	104	1329	330	1697	409	75	75	1366	308	1806	369
Total	896	927	1571	688	2071	914	618	619	1600	518	2148	912

(1) – the lowest salary in return for the which the school leaver would agree to work

(2) – a salary that the school leaver would recognise fairly satisfactory

Source: BKL – Population Study 2010–2012.

Accounting for all the information analysed earlier, the lowering of aspirations concerning remuneration in these categories of school leavers may be interpreted in at least two ways: either it proves a relatively greater determination of technical school leavers to find employment (at the price of lowering their financial expectations) or their better knowledge of the labour market, and the ability of realistic assessment of the economic situation (in which case, the remaining categories of school leavers should be recognised as “incurable optimists”).

<sup>76</sup> Statistically significant differences at the level  $p < 0.05$  for:

a) the lowest acceptable salary in 2011: vocational (postsecondary), technical (technicians and other associate professionals after technical schools), technical (other occupations), worker after a basic vocational school compared to services after basic vocational school

b) satisfying salary in 2011: profiles of education, with the exception of “other after basic vocational school” compared to services after basic vocational school

c) the lowest acceptable salary, and satisfying salary in 2012: general (general secondary school), technical (technicians and other associate professionals after technical schools), worker after a basic vocational school compared to services after basic vocational school.

## 2. The labour market situation of young HE graduates

### 2.1. General description of the labour market situation of young HE graduates

Before discussing the results related to the labour market situation of individual cohorts of higher education graduates (aged 30 and below), let's look at the selected characteristics describing the general situation of the group in question. Information presented in this part is based both on the data from the three rounds of studies taken together, and on the comparison of data at two points in time: in 2011 and 2012. Described first is the labour market situation of young HE graduates, followed by their aspirations and actual earnings.

**General description of the occupational situation of young people with higher education**

**Table IV.6.**

**Labour market situation of young HE graduates (according to BAEL), broken down by sex (years 2011–2012)<sup>77</sup>**

Labour market situation	Men 2011 (N=542)	Men 2012 (N=368)	Women 2011 (N=971)	Women 2012 (N=700)	Total 2011	Total 2012	Men 2012–2011	Women 2012–2011
Working	82.5%	81.3%	74.9%	70.6%	77.6%	74.3%	-1.2%	-4.3%
Unemployed	9.6%	11.4%	11.6%	15.1%	10.9%	13.9%	1.8%	3.5%
Inactive	7.9%	7.3%	13.5%	14.3%	11.5%	11.9%	-0.6%	0.8%

Source: BKL – Population Study 2010–2012.

Attention must be primarily paid to the level of employment rate among young (aged 30 and below) higher education graduates, which in 2011 was close to the general rate of the employed with higher education (76.3%).<sup>78</sup> This may suggest that the situation of HE graduates defined more broadly than in the case of typical studies of graduate careers<sup>79</sup> is not as bad as presented in the media. In 2011, the rate reached a similar value (77.65%) in the case of graduates participating in the BKL Study to the analogous value calculated for the graduates as part of the Labour Force Survey (BAEL GUS, with the maximum value in the 4thQ2011 at 76.4%, and the minimum value in the 1stQ – 68.8%).<sup>80</sup>

In the light of the BKL Study, the unemployment rate in the group of higher education graduates grew (by 3 percentage points) and amounted to 13.9% in 2012. This increase was higher among women (by 3.5 percentage points) than among men (by 1.8). Characteristic of men was also nearly twice lower rate of the inactive; in the context of the results presented above, men are better positioned in the labour market than women with higher education.

The value of employment rate (according to BAEL) points to a decisively better start of higher education graduates into employment, compared to all the graduates and school leavers, with the difference in the employment rate between the two groups in 2011 and 2012 ranging from 12.4 percentage points to 20.4 percentage points, to the benefit of the first (Annex, Chart A1).

<sup>77</sup> Statistically significant differences at  $p < 0.05$ .

<sup>78</sup> See: GUS – BDL.

<sup>79</sup> People aged 30 and below.

<sup>80</sup> These discrepancies probably result from a different definition of the graduate accepted for the two studies.

The factors generally believed to differentiate the occupational opportunities of HE graduates are the fields of study and also the cycle of the studies completed. Frequently encountered in media debates, the demarcating line between the fields of study better or more poorly fitting the market is at the same time the divide between engineering and non-engineering fields of study. The chart below (Chart IV.7) lists the basic characteristic features of the labour market situation of respondents from the two groups.

**Table IV.7.**

**Degree obtained in higher education vs. labour market situation of the respondent<sup>81</sup>**

Occupational situation	Baccalaureate (N=732)	Engineer (N=81)	Master (N=1421)	Master Engineer (N=109)
Working	63.8%	76.5%	80.7%	85.3%
Unemployed	16.9%	12.3% <sup>1</sup>	10.3%	10.1%
Inactive	19.3%	11.1%	9.0%	4.6%

<sup>1</sup> The small counts result from the way of collecting data in the 1st, 2nd, and 3rd rounds of the BKL Study. In the first round, there was no differentiation between an engineer and a master engineer (the latter being roughly equivalent to MSc) among the multiple options of the answer to the question, hence the table includes – in the case of these categories – only data from the third round of the BKL Study.

Source: BKL – Population Study 2010–2012.

Table IV.7 clearly demonstrates increased market opportunities after moving from the category of baccalaureate degree holders (63.8% of the employed) to the category of master degree holders (80.7% of the employed), with the situation being similar in the case of engineers (76.5%) and master engineers (85.3%). This increase takes place at the cost of a drop in the number of the inactive and the unemployed. What may seem interesting is the improvement of the market position accompanying moving from the first to the second cycle of higher education, which is more significant among the people who do not have the degree of the engineer, as the rate of unemployment in their case decreases sharply (by over 6 percentage points), compared to the people continuing education after obtaining the engineer's degree, where the drop is not as significant (above 2 percentage points). This means that the market situation of young engineers is relatively good, and the fact of acquiring additional qualifications by obtaining the diploma of second cycle studies does not significantly increase the chances of finding a job. The respondents who do not have such a title are in a different situation, therefore in their case a master degree may provide a significant competitive edge in the market.

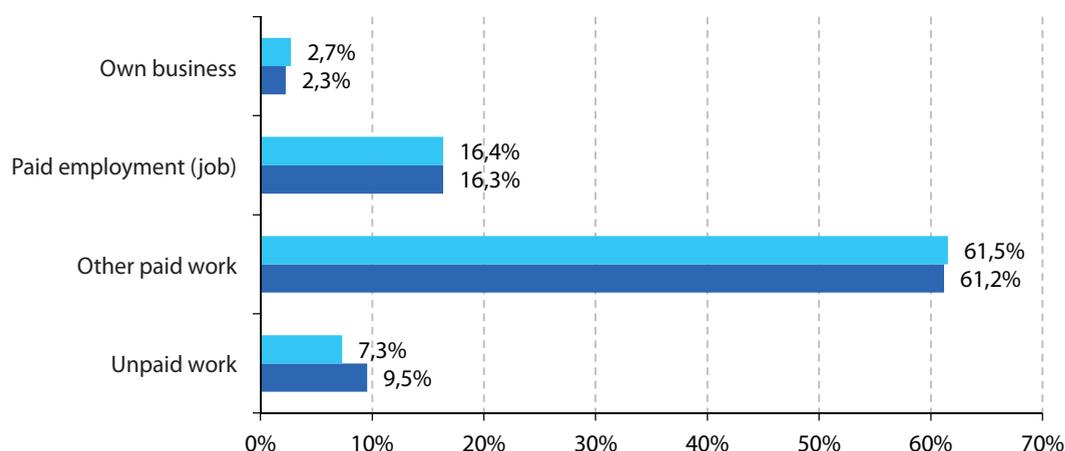
It must, however, be emphasised that the conclusions stemming from the chart do not reinforce the opinion about the much better position of people holding master engineer degree as compared to "ordinary" master degrees. Although the percentage of the working among the graduates with such title is significantly higher (by approximately 5 percentage points) than the analogous share among the young "non-engineers", the difference in the unemployment rate is in fact neglectable.

The fact that the level of unemployment measured according to the BAEL methodology is comparable among the graduates in master engineering and "just" master fields of study, can in no way be considered a proof that graduation from an engineering or non-engineering fields of study makes the graduates face the same opportunities in the labour market. This is rather a testimony of the fact that there are other, equally important factors that shape the position of young higher education graduates in the market. This is a problem examined in greater detail towards the end of this chapter, in the investigation of the situation of graduates of strategic and mass fields of study in the market.

As has been mentioned before, the market situation of an individual should be described not only regarding employment but also in relation to the form of such employment.

### Chart IV.8.

**Labour market situation of young (aged 30 and below) people with higher education in 2011–2012 (N<sub>2011</sub>=1456, N<sub>2012</sub>=1027)**



Source: BKL – Population Study 2010–2012.

It is worth adding at the beginning that there are in fact no significant differences in the frequency of individual forms of employment observed between 2011 and 2012, and only the proportion of people running own business dropped in 2012 by approximately 2 percentage points.<sup>82</sup> Of all the higher education graduates covered by the study, approximately 61% have “jobs”, approximately 16% do other paid work, below 3% – unpaid work, and from 7% to 9% run their own businesses.

A factor that has a significant impact on the above-mentioned results is the sex of the respondent: the data broken into women and men is presented in the table below (Table IV.8).

### Table IV.8.

**Labour market situation of young higher education graduates, broken down by sex (years 2011–2012)**

Labour market situation	Men 2011 (N=538)	Men 2012 (N=365)	Women 2011 (N=918)	Women 2012 (N=662)	Men 2012–2011	Women 2012–2011
Own business	14.5%	11.2%	6.6%	5.1%	-3.3%	-1.5%
Paid employment (job)	61.7%	63.3%	60.9%	60.6%	1.6%	-0.3%
Other paid work	13.9%	17.0%	17.8%	16.0%	3.0%	-1.7%
Unpaid work	2.4%	3.0%	2.2%	2.6%	0.6%	0.4%

Source: BKL – Population Study 2010–2012.

The following conclusions can be drawn from the above:

1. A significantly smaller percentage of young women – higher education graduates – run their own companies (5–6% compared to 14–11% among men).
2. There are no significant differences between women and men in the case of other paid (non-job) and unpaid employment, although after combining the samples from 2011 and 2012, we notice a higher proportion of men in the group of “job holders” and an advantage of women among these doing other paid work, which in most cases, stems from the specific family relations in the two groups.

<sup>82</sup> Yet the difference lies within the range of standard deviation.

## 2.2. Changes in the labour market situation of successive graduating cohorts

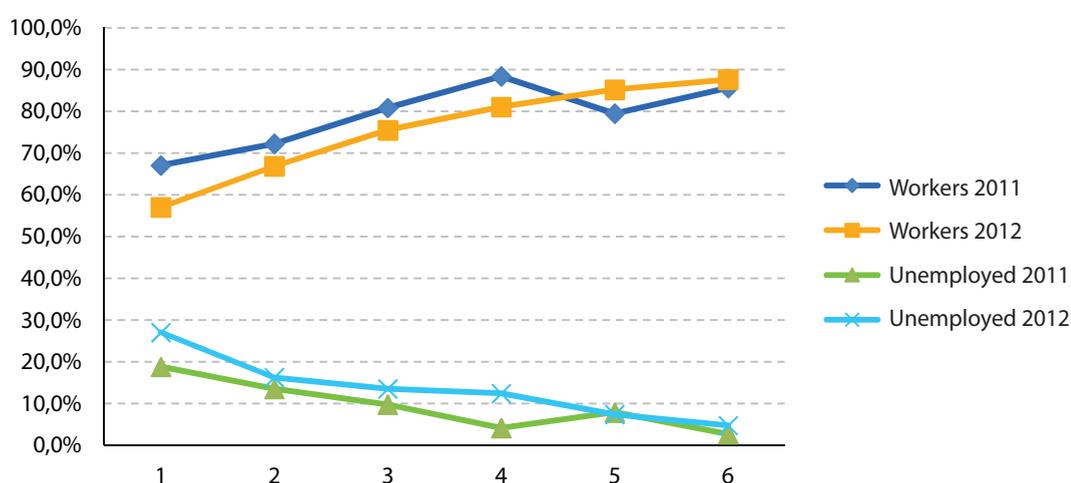
This part of the report describes the labour market situation of individual graduating cohorts. First, we take a look at basic employment rates, and later – focusing on the group of working graduates – describe the forms of employment most popular in the group.

### 2.2.1. Description of economic activity of individual graduating cohorts

Looking at the chart below (Chart IV.9), we notice that – a conclusion that is hardly surprising at all – the situation of HE graduates in the first years after finishing education is generally worse, and it systematically improves, as pointed to by an increased opportunity of having employment, parallel with the extending period of experience in the labour market. A significant factor that nevertheless cannot be fully controlled in the case of the BKL Study, is the moment when the graduates enter the labour market, which can increase or decrease opportunities for finding and maintaining employment in the longer perspective. This factor is partially described below.

#### Chart IV.9.

**Percentage of the employed, the unemployed and the inactive, broken down by the number of years since graduation from higher education\***



\*  $N_{2011}=1513$ ,  $N_{2012}=1068$ .

Source: BKL – Population Study 2010–2012.

Significant differences have been observed between two rounds of the study (2011 and 2012), which favours the formulation of the following conclusions:

1. The differences in the labour market situation of young people (between 2011 and 2012) are noticeable only in the group of fresh HE graduates (i.e. those who finished education in HE institutions within last 12 months). In their case, the proportion of the unemployed is by 10 percentage points higher among the 2012 higher education graduates, as compared to the 2011 graduates. This is another argument in support of the claim about the deteriorating situation of the fresh higher education graduates.
2. Those who finished their higher level education within two years from the time of the study are more likely to find employment than those who have been in the labour market for one year, although their market position was better in 2011 than in 2012.

3. The longer a graduate remains in the market, the more the differences between the two rounds of the study become blurred, which may suggest that it is the moment of entering the labour market that has a significant impact on the probability of finding employment within the first two years since graduation. At a later time, it is rather of smaller significance, while other factors discussed in the further part of the chapter become more significant.
4. Sex is the factor that significantly impacts the economic activity of the respondents (negatively in the case of women); at the same time, observable among the last six annual cohorts of HE graduates is the increasing difference in the rates of women and men employment while moving to the increasingly older graduate cohorts. The spread in this difference results mostly from the fact that women enter the period of starting family life and reproduction, which in the case of women with higher education is ever more often postponed to the time following completion of higher education (see: Annex, Table A4).

Due to the specific nature of the data collected as part of the BKL Study, it remains impossible to trace the history of individual HE graduates, however, an attempt at tracing the histories of individual cohorts leaving the system of education at higher level can be made. Such an attempt was made on the grounds of the database provided in the table below (Table IV.9).

It compares the first two rounds of studies, and the data are listed year to year so that e.g. graduates operating for one year in the market in 2011 were compared to the graduates present in the labour market for two years in 2012. Such a comparison makes it easier to formulate preliminary conclusions concerning the situation of individual cohorts leaving the system of education.<sup>83</sup>

**Table IV.9.**

**Proportion of the employed, the unemployed, and the inactive vs. the graduates cohort**

(N2011<sub>k2010</sub> = 279, N2011<sub>k2009</sub> = 242, N2011<sub>k2008</sub> = 256, N2011<sub>k2006-2007</sub> = 408, N2012<sub>k2010</sub> = 140, N2012<sub>k2009</sub> = 143, N2012<sub>k2008</sub> = 156, N2012<sub>k2006-2007</sub> = 232)

Graduates cohort	Working (data from 2011)	Working (data from 2012)	Unemployed and inactive (data from 2011)	Unemployed and inactive (data from 2012)
<b>2010</b>	72.4%	69.3%	27.6%	30.7%
<b>2009</b>	76.4%	78.3%	23.6%	21.7%
<b>2008</b>	80.9%	82.7%	19.1%	17.3%
<b>2006-2007</b>	84.6%	84%	15.4%	16%

Source: BKL – Population Study 2010–2012.

Assuming that every successive year from entering the labour market increases the graduates' chances of finding employment, we can expect higher employment rates in the case of studies conducted in 2012 as compared to those of 2011 (in 2012, each cohort remained in the labour market one year longer). Such a conclusion works, yet only in reference to the cohorts that remained in the market for over a year in 2011, as indeed in their case, every successive year in the market increases the chances<sup>84</sup> of employment or does not influence it at all. Only in the case of the graduates from 2010, employment rates recorded in 2012 show a small drop (by approximately 3 percentage points). This confirms the conclusion made earlier about the suboptimal market situation of graduates immediately after leaving higher education. It suggests, however, the need to continue monitoring of the history of this cohort (in 2013) to verify the claim about the growing chances of employing graduates remaining in the market for over two years also in the case of this group.

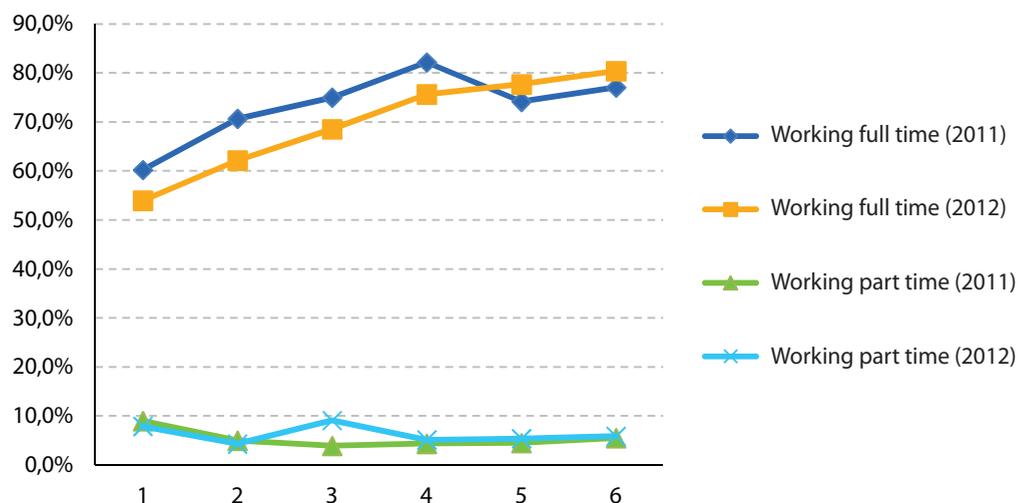
<sup>83</sup> As mentioned in the introduction, the structure of the samples from 2011 and 2012 was similar as far as significant variables that could potentially disrupt the conclusions are concerned.

<sup>84</sup> A slight drop in the proportion of the employed can be seen in the case of the cohorts leaving HE institutions in 2006–2007.

Another factor characteristic of the market situation of higher education graduates is the fact of working full- or part-time. A listing of such data for the last six cohorts leaving HE institutions, presented at two points in time, is illustrated in the chart below (Chart IV.10).

**Chart IV.10.**

**Percentage of people working full- and part-time, broken down by the number of years since completion of higher education\***



\*  $N_{2011_{k1}} = 279, N_{2011_{k2}} = 242, N_{2011_{k3}} = 256, N_{2011_{k4}} = 230, N_{2011_{k5}} = 178, N_{2011_{k6}} = 109, N_{2012_{k1}} = 165, N_{2012_{k2}} = 140, N_{2012_{k3}} = 143, N_{2012_{k4}} = 156, N_{2012_{k5}} = 130, N_{2012_{k6}} = 102$

\*\* The % values do not sum up to 100, as the chart presents only selected categories related to employment (full-time and part-time). The percentages refer to the total population, and not to the working population.

Source: BKL – Population Study 2010–2012.

Much like in the case of the chances of finding employment, the chances of working full-time increase with the successive years in the labour market, and after 4–6 years they remain at the level of 80% of the employed.

The share of part-time workers seems far more stable in time, and is highest in the first year after leaving the system of education, while in the successive years, it remains at a fairly stable level.

Differences between the two rounds of the study (2011 and 2012) can be seen also here: the share of working full-time (in the case of the four youngest cohorts leaving the system of education) was significantly higher in 2011 as compared to 2012. This can be another piece of evidence proving the more difficult market situation of the most recent graduating cohorts, which is, however, easier to verify by juxtaposing the data concerning the situation of individual graduate cohorts at two points in time. Such a listing is presented in the table below (Table IV.10).

**Table IV.10.**

**Percentage of the employed, the unemployed, and the inactive vs. the graduate cohort\***

Graduate cohort	Working full time (data from 2011)	Working full time (data from 2012)	Working part time (data from 2011)	Working part time (data from 2012)
<b>2010</b>	60.2%	53.9%	9.0%**	7.9%**
<b>2009</b>	70.7%	62.1%	5.0%**	4.3%**
<b>2008</b>	75.0%	68.5%	3.9%**	9.1%**
<b>2006–2007</b>	78.7%	76.6%	4.4%**	5.2%**

\*  $N_{2011, k_{2010}} = 279$ ,  $N_{2011, k_{2009}} = 242$ ,  $N_{2011, k_{2008}} = 256$ ,  $N_{2011, k_{2006-2007}} = 408$ ,  $N_{2012, k_{2010}} = 140$ ,  $N_{2012, k_{2009}} = 143$ ,  $N_{2012, k_{2008}} = 156$ ,  $N_{2012, k_{2006-2007}} = 232$

\*\* The % values do not sum up to 100, as the chart presents only selected categories related to employment (full-time and part-time). The percentages refer to the total population (the cohort), and not to the working populations.

Source: BKL – Population Study 2010–2012.

The deterioration of the market situation of higher education graduates is clearly visible in the case of the last three cohorts (graduates from 2010, 2009, and 2008). Graduates from these cohorts experienced higher chances of working full time in the first year after graduation than in the further years (2 or 3 years from finishing education).

As described above, the longer a cohort has remained in the market, the better position it holds there, and not only as far as the employment itself is concerned, but also in the context of full-time employment. It is a reason to worry why this rule does not work in the case of the second graduating cohort (the cohort of 2009). This might have been caused by two types of factors. First, the moment when that cohort entered the market can play a role, as the young were given no ideal conditions for jobseeking in 2009 (and a poor start may have a negative impact in the successive years in the market). Secondly, the very fact of being a relatively “young cohort” may remain a significant factor, as these people have been in the labour market only for two (in 2011) or three (in 2012) years, so that in the case of higher education graduates this time may be treated as the “start-up period”, in which the labour market situation of the cohort is liquid and depends on many not only market-related factors.<sup>85</sup>

### 2.3. Earnings of working HE graduates and jobseeker wage-related aspirations

The last element of the general description of the group of young higher education graduates is the comparison of the earnings of working respondents with the wage-related aspirations of jobseekers.<sup>86</sup> The table below (Table IV.11) portrays the averages, the median, and the standard deviation from the actual remuneration recorded in the given group. Due to the emergence of outlying values (mostly higher), a decision was made to cut off the 25% of highest and lowest values for calculation purposes.

<sup>85</sup> For example in this case, the employment rate depends not only on the ability of the graduates to find employment but also on the eagerness to enter any employment. It must be remembered that young people can postpone the process of seeking work not only for reasons of economic situation.

<sup>86</sup> Aspirations were measured by the means of questions about the salary that the respondent would consider fairly satisfactory and the lowest salary for which he or she would agree to work.

**Table IV.11.**

**Average net earnings<sup>87</sup> of higher education graduates (aged 30 and below) vs. sex and type of studies completed<sup>88</sup>**

Respondent's sex	Type of studies	N (after trimming)	Average (after trimming)	Median (before trimming)	Standard deviation (before trimming)	Standard deviation (after trimming)
Men	non-engineering	136	1903.86	2100.00	1412.800	317.164
	engineering	61	1981.22	2200.00	1395.642	303.293
	Total	197	1927.81	2138.00	1406.833	314.215
Women	non-engineering	282	1793.56	1641.60	1018.712	291.964
	engineering	113	1784.03	1651.75	1210.284	275.462
	Total	395	1790.84	1641.60	1073.951	287.025
Total	non-engineering	418	1829.45	1817.30	1207.932	304.441
	engineering	174	1853.16	1800.00	1320.030	299.884
	Total	592	1836.42	1817.30	1239.420	303.049

Source: BKL – Population Study 2010–2012.

Average net earnings of higher education graduates oscillated around PLN 1800, although it is worth noting that the group featured quite a wide-ranging variety of income. As could have been expected, the earnings of women were on average lower than those of men: data before trimming prove a difference exceeding PLN 300 to the advantage of men (median), and the average after the trimming of results shows a slightly smaller difference: in excess of PLN 100. If, therefore, differences in earnings occur between women and men, these are mostly in the group of the best earners, which in turn may suggest that the difference between women and men is stronger not as much at the level of remuneration at the same positions (although here the advantage of men can be observed as well) but rather at the level of access to the best paid positions. The problem of lower salaries of women, frequently brought down to their obvious discrimination by the employers, seems to be more complicated, as it requires controlling a range of constituents of the problem, including the life-cycle, which in the case of women includes childbirth and – which is increasingly often paid attention to – different aspirations of women concerning professional life and revenue, and their smaller efficiency in situations requiring strong competition [see: Jurajda, Munich, 2011], which limits their access to managerial positions. Nevertheless, the actual poorer occupational position of women (higher economic unemployment rates) is hard to challenge; what however remains as yet unclear are the reasons for such a status quo.

What may come as a surprise is the fact that the type of studies (engineering/non-engineering) is a factor that differentiates earnings only in the group of men, and also in this case only by approx. PLN 70 after trimming the extreme values (PLN 100 before the trimming), while it does not pose a distinctive factor in the earnings of women. An average gain resulting from graduation from an engineering field of study seems therefore higher for men (although at the same time, it may seem surprisingly low), while such a gain was not observed among women.

What, in turn, differentiates the earnings to a great extent is the completed cycle of studies: graduates of the second cycle studies earn more than the graduates of the first cycle, with the difference remaining at the level of approx. PLN 400 in the case of men and approx. PLN 300 in the case of women. This difference may be explained to a great degree by the characteristic traits of the positions assumed, and occupations in which graduates of both cycles work. People with a bachelor's degree far less often assume positions reserved for professionals, and more often perform works addressed to people with secondary education (e.g. service and sales workers).

<sup>87</sup> Data from three combined samples, rescaled to the nominal value for 2012.

<sup>88</sup> The differences are significant at the level of  $p < 0.05$ .

**Table IV.12.****Remuneration of bachelor and master degree holders vs. the sex of the respondent<sup>89</sup>**

Respondent's sex	Education	N	Median	Average	Standard deviation
Men	Baccalaureate	113	1846.80	2082.20	1442.651
	Master	210	2222.45	2567.36	1416.675
Women	Baccalaureate	197	1436.40	1524.50	749.818
	Master	472	1744.20	1942.70	1103.776

Source: BKL – Population Study 2010–2012.

**Earnings of working graduates of higher education and wage-related aspirations of jobseekers**

Closing the part of the chapter devoted to the general situation of higher education graduates in the market, we set the information presented above and concerning the actual earnings of HE graduates against data on the remuneration-related aspirations of the unemployed graduates (Annex, Table A5). The analysis makes it possible to draw the following conclusions:

1. Remuneration-related aspirations of unemployed higher education graduates seem to be realistic and strongly set in market reality: the lowest salary in return for which they would be ready to start working is lower than the average market salary in a given group.
2. Nevertheless, the salary that the respondents seeking employment consider fairly satisfactory is higher than the remuneration that the market is ready to offer them. This suggests a certain divergence between the remuneration-related aspirations of higher education graduates and market reality.
3. The factor that significantly differentiates both remuneration-related aspirations and actual remuneration is not the fact of graduating from an engineering or non-engineering field of study, but the sex of the respondent. Women earn on average PLN 500 less than men, yet also their “expected” salary is lower by approx. PLN 500 from one that men find satisfactory, which is why it is difficult to assess whether the lower remunerations expected by women result from their actually lower salaries, or whether the lower salaries are the result of lower expectations recorded in the group.
4. An interesting situation is observed among the non-engineering graduates asked about the lowest salary in return for which they would work: in the case of this group and question thus asked, the difference between the minimum aspirations of women and men is lowest and amounts to approx. PLN 300.

Remembering about the general conclusions concerning the average earnings of higher education graduates presented above, let's examine analogous data presented in a breakdown into cohorts. The tables below list information concerning the actual (net) earnings of people graduating from higher education, in specific time.

<sup>89</sup> The differences are significant at the level of  $p < 0.05$ .

**Table IV.13.**

**Earnings of higher education graduates vs. number of years since completing higher education<sup>90</sup>**

Number of years since completing higher education	Men (N)	Women (N)	Total (N)	Men (median)	Women (median)	Total (median)
1	101	121	222	1846.80	1389.70	1539.00
2	91	132	223	2138.00	1539.00	1846.80
3	61	135	196	2138.00	1641.60	1800.00
4	71	126	197	2565.00	1817.30	2000.00
5	41	111	152	2138.00*	1700.00	1800.00
6	33	70	103	2359.80*	1846.80	2000.00

Source: BKL – Population Study 2010–2012.

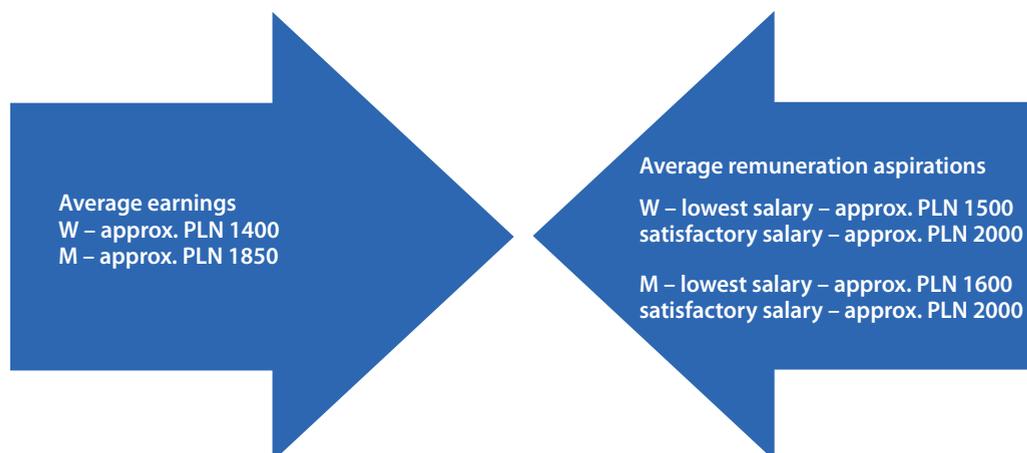
A few interesting dependencies can be found in the table above (Table IV.13). First, the claim about generally higher earnings of men graduating from HE institutions, irrespective of the number of years since graduation, is corroborated. Secondly, a growth in net earnings of the respondents parallel to the time in the market can be seen (inclusion in the older cohorts). Thirdly, remembering the average revenue-related aspirations of the respondents (satisfactory salary for the unemployed women being PLN 2000, and for men – PLN 2500), we notice that it is difficult for an average graduate to have their aspirations fully satisfied, even if they have remained in the labour market for six years already.

It may seem even more interesting to compare remuneration-related aspirations within a selected group: the unemployed who have been in the market for just one year (the youngest group leaving the HE institutions) with the actual earnings of these people. Such a comparison proves that the aspirations of unemployed female HE graduates more poorly fit the reality of the labour market: the minimum salary for them to declare eagerness to become employed is higher than the average remuneration obtained in this group, and the discrepancy between the actual salary and one satisfactory for the unemployed women is approx. PLN 600. It must be added that the remuneration-related expectations of the youngest class of the unemployed women are in fact the same as those of the older cohorts (even ones operating for 5 years in the market), which may demonstrate overestimation of own earning potential, which is verified by the labour market in later years. This verification, however, is not linked to a drop of aspirations (which, it is worth adding, do not seem to be exaggerated), yet rather with maintaining them at the same level.

The situation of the youngest male HE graduates looks different: the remuneration-related expectations are definitely more realistic. The lowest average salary they would be ready to work for (PLN 1600) is lower than the average salary (PLN 1850), which in turn lies between the lowest and optimum (PLN 2200) salaries.

**Figure IV.1.**

**Average actual earnings vs. remuneration-related aspirations of the unemployed HE graduates in the labour market\*<sup>91</sup>**



**Analysis of the occupational situation of graduates of strategic and mass courses of study**

\*  $N_m=82, N_w=116$ .

Source: BKL – Population Study 2010–2012.

#### 2.4. Analysis of the labour market situation of graduates of strategic and mass fields of study

In the final part of the chapter, we pay special attention to the market situation of graduates of the fields of study that higher education experts classified among strategic, i.e. ones where education is cofinanced by the Ministry of Science and Higher Education as part of the so-called programme of commissioned fields of study.

*The programme of commissioned fields of study has been conducted since 2008 and means co-financing education in given fields (e.g. compensatory programmes for first-year students and motivational scholarships for the best students). Moreover, the programme grants additional funds to HE institutions for modernisation of the study curricula, classes conducted by eminent professionals, courses and internships held with potential employers, study visits to businesses offering employment of graduates, and participation of students in scientific and technical conferences (based on information available on the ministry's website).*

For the sake of the analysis, field of study were classified into two groups:

1. Strategic fields (the group consists of all the fields of study that were at least once commissioned by the Ministry)<sup>92</sup>
2. Other fields of study (the group consists of all the remaining fields).

Participating in the second round of the study in 2011 were 13.9% of graduates in fields of study classified by the National Centre for Research and Development (NCBiR) as strategic,<sup>93</sup> while the corresponding share in 2012 amounted to 12.4%.

<sup>91</sup> The differences are significant at the level of  $p<0.05$ .

<sup>92</sup> For example, if a field X (e.g. material engineering at the AGH–UST University of Science and Technology in Kraków) obtained the status of a commissioned field of study, in our analysis we count material engineering courses offered by other HE institutions into the class of the commissioned fields of study.

<sup>93</sup> Defined by NCBiR experts, these fields of study are the grounds for selection of the fields of study commissioned by the Ministry.

**Table IV.14.**

**Percentage of the unemployed/inactive and working graduates vs. the fact of their graduation from a strategic field of study ( $N_{do30} = 2581$ ,  $N_{do10} = 4864$ )**

Labour market situation	Graduates aged 30 and below		Graduates from the 10 recent classes <sup>1</sup>	
	Strategic field of study	Other field of study	Strategic field of study	Other field of study
Unemployed	9.6%	12.5%	6.3%	8.1%
Inactive	8.7%	12.1%	5.2%	8.1%
Working	81.6%	75.4%	88.5%	83.8%

<sup>1</sup> For the purpose of this study, those who graduated from the first field of study in the last 10 years and do not continue education at present are construed as graduates from the last 10 years.

Source: BKL – Population Study 2010–2012.

Already a preliminary analysis of the data in the table allows to draw conclusions in line with the strategy of promoting strategic fields of study, implemented by the Ministry of Science and Higher Education: generally, graduates in the fields defined as strategic are in a better position in the market, with the share of working graduates in this group being higher by approximately 6 percentage points than the analogous share among the graduates of the remaining fields.

For a fuller picture of the market situation of people graduating in the fields treated as strategic by the Ministry, it is necessary to present information not only about the average values in the entire group, but also to present data concerning the market successes and failures of graduates in specific fields of education in the group. In other words, to complement the conclusion made above, we now take a look at the volatility within the group of fields preferred by the Ministry of Science and Higher Education.

**Table IV.15.**

**Percentage of the unemployed/inactive graduates in selected fields defined as strategic by the Ministry of Science and Higher Education**

Strategic fields of study	Total		Graduates from the 10 most recent annual cohorts	
	%	N	%	N
Computer science	7.5% (4.9%) <sup>1</sup>	268	9.0% (6.6%)	166
Civil engineering	10.3% (4.8%)	165	5.6% (4.2%)	72
Mathematics	11.2% (1.9%)	161	10.9% (3.1%)	64
Biotechnology	12.1% (5.3%)	190	12.0% (6%)	83
Physics	13.8% (1.1%)	58	19.0% (4.8%)	21**
Environmental protection	14.5% (8.1%)	124	15.2% (8.9%)	79
Chemistry	16.2% (4.1%)	74	17.2% (10.3%)	29**
Environmental engineering	17.6% (8.1%)	74	20.9% (9.3%)	43

<sup>1</sup> Numbers in brackets denote the proportion of the unemployed in individual groups.

Source: BKL – Population Study 2010–2012.

Table IV.15 presents selected<sup>94</sup> fields of study counted into the group of strategic ones, together with information about the proportion of graduates in these fields who at the moment of the study were unemployed or inactive. The data presented is broken down into the graduates total and graduates in the last 10 years.

The data in the table shows large internal variety within the fields classified into the strategic group, which is manifested in their highly differentiated situation in the market. Visible are both the fields of study whose completion made most respondents encounter no problems with finding employment (e.g. mathematics, civil engineering and physics), and ones in whose case the proportion of the unemployed is similar and at times even higher than is the case in the group of graduates in the fields that do not belong to the strategic group (environmental engineering with 9.3% of unemployed graduates from the last 10 years, and environmental protection with 8.9%).

Table IV.16 supplements the analysis and presents analogous data for the selected mass fields of study. These fields of study, according to common belief, do not guarantee a market success of their graduates

**Table IV.16.**

**Percentage of the unemployed/inactive graduates in selected mass fields of study<sup>95</sup>**

Mass fields of study	Total		Graduates from the 10 most recent annual cohorts	
	%	N	%	N
Management and marketing	16.30% (8.5%)	15.70% (7.7%) <sup>1</sup>	375	484
Law	16.30% (5.2%)	15.90% (6.5%)	170	326
Economics	15.30% (5.4%)	13.90% (6.8%)	382	649
Administration	16.50% (7.8%)	17.90% (8.5%)	246	321
Pedagogy	17.10% (6.6%)	19% (10.3%)	331	638
Sociology	19.80% (7.9%)	21.40% (9.5%)	84	126
Management	14% (13.3%)	14.80% (13.3%)	169	243
Tourism and recreation	28.20% (18.4%)	30.20% (19.8%)	86	103

<sup>1</sup> Numbers in brackets denote the proportion of the unemployed in individual groups.

Source: BKL – Population Study 2010–2012.

Analysing the table above, we may draw the following conclusions:

1. Unquestionably, the graduates of tourism and recreation show worst market situation statistics, as no fewer than approx. 30% of all the graduates in this field of study have no jobs (with 18.4% being unemployed).
2. The situation of graduates of management (13.3% of unemployed graduates from the last 10 years), pedagogy (10.3% of graduates from the last 10 years being unemployed), and sociology (9.5% of unemployed graduates from the last 10 years) is not rosy either.
3. The market situation of HE graduates improves with the successive years in the market, and the increase in the rate of employment is more strongly connected not as much to the drop in the proportion of the inactive but to the decrease in the number of the unemployed.
4. Comparing the market situation of graduates in fields of study considered mass with the situation of graduates in strategic fields, we notice a generally better labour market situation of students graduating in strategic fields, yet this dependency is not visible in the case of all the fields. The number of strategic fields of study includes also the ones whose graduates have similar if not

<sup>94</sup> Presented are the fields of study in whose case the number of graduates in the database was 50 or more.

<sup>95</sup> The table presents only the field of study in whose case information on at least 100 graduates was gathered.

greater problems with finding employment than after selected mass fields of study. Due to the small count of the sample, this analysis does not account for a range of factors that may moderate this dependency, and factors including e.g. the students' sex and the type of institution from which they graduated. Generally speaking, compared to the graduates in mass fields of study, graduates in the strategic fields (sciences) are more frequently male, while the institutions they graduate from are more often universities and technical universities,<sup>96</sup> that is – relatively – good schools. Just the fact of being male and graduating from a better school increases the opportunity of employment. Therefore, we may suspect that control of these factors would have reduced the discrepancies between the market situation of graduates of mass and strategic fields of study.

An especially interesting group among the mass fields are the ones that registered the lowest employment-related rates, namely: tourism and recreation, sociology, and pedagogy. In the public debate, they are frequently classified as not market oriented, and ensuring no bright future. In their case too, we should verify the level of homogeneity of the group, and test whether graduates in these fields have generally poorer market opportunities, or whether these opportunities are different for different schools. We will take a closer look at those, testing the influence of the fact of graduating from a specific type of school – public vs. non-public institution of higher education – on having a job and being unemployed.

**Table IV.17.**

**Percentage of unemployed graduates of individual fields of study vs. type of institution of higher education graduated from<sup>97</sup>**

Field of study	Public	Non-public
Sociology (N=84)	3.50% <sup>1</sup>	19.2%** (N=27)
Tourism and recreation (N=86)	21.70%	17.50%** (N=40)
Pedagogy (N=331)	8.50%	14.60% (N=96)

<sup>1</sup> The results in the table above must be approached with great care. Such a low level of unemployment in this group may result from the small count of the sample of graduates in specific fields, but may also be the result of lack of control over additional variables, for example, the fact of graduating in another field.

Source: BKL – Population Study 2010–2012.

Table IV.17 represents a quantitative look at the situation of graduates in the fields of study that were considered “not market oriented” broken down into the graduates of public and non-public HE institutions. At a first glance, the results seem to be inconclusive, as a different rule seems to apply to each field of study, although preliminary conclusions, worth being verified in the successive round of the BKL Study, and concerning the market situation of the listed groups, may be drawn.

The table above shows slight differences in the labour market situation of graduates of tourism and recreation in public institutions, compared to non-public HE institutions, to the advantage of the latter. It turns out that the chances of having employment among the graduates of the same field of study in non-public HE institutions is slightly higher than in the case of public institutions. Generally, however, the probability is relatively low in the case of both types of institutions.

A similar situation is characteristic of the graduates of individual fields of study in pedagogy and sociology at public and non-public HE institutions. In their case, the percentage of the unemployed (in the case of pedagogy by over 6 percentage points, and in the case of sociology – by over 15 percentage points) is significantly lower among the graduates of public institutions. This conclusion seems to be significant for example in the context of the discussion concerning the efficiency of education in individual fields of

<sup>96</sup> Such fields of study are usually covered by these HE institutions.

<sup>97</sup> Due to the small number of data describing graduates in individual fields of study, the percentages above should be treated as estimates, burdened with high error. Therefore, we can expect that the differences in the unemployment rate in the population are not as drastic as in the case of the calculations made on the grounds of the BKL.

study, conducted by professionals; a debate in which sociology has recently been treated as a “no future” field. Worth paying attention to in this discussion is the fact that the message presented by the mass media (and, unfortunately, also by many alleged professionals in higher education) is not always credible, where the picture of graduates of sciences successful in the market is set against the picture of the market failure of graduates of humanities and social sciences. It is also worth reminding that there are fields considered strategic in whose case nearly 10% of graduates from the last 10 annual cohorts struggle with lack of work.

The authors of this publication believe that the analyses presented point to the wrong line of thought in the discussion concerning the market situation of HE graduates. This discussion focuses mostly on the comparison of occupational opportunities of graduates with the fields of study that they finish (more or less market oriented), while – which the authors have already and repeatedly mentioned – a greater attention in the debate on the market situation of graduates should be paid to how the fact of graduation from a specific institution of higher education with a given level of education impacts their situation. [see: Jelonek, 2011]. In other words, being eager to make conclusions about the market situation of higher education graduates, we must necessarily control a very important factor that moderates this relationship, namely, the type of institution from which the students graduated.<sup>98</sup>

As mentioned in the report from the first round of the BKL Study, necessary to achieve that is a systematic study of the history of HE graduates, based on tested and credible research tools, and a verified methodology. Enough to mention that such an approach is the binding research standard in countries representing a high level of development of higher education, including the United Kingdom and the United States (i.e. the countries which, together with their systems of higher education, are quoted as role models for Polish HE institutions by representatives of the Polish Ministry of Science and Higher Education).

## Conclusion

The deteriorating market situation of the young, and especially graduates, has been a regular subject of the public debate in the recent years. The debate focuses on the growing unemployment rates in the group, and even identifies graduates in certain fields of study with the so-called “future unemployed”. The problem of the poor market situation of people finishing education acquires a new significance in the context of public interventions that have either already been or are being conducted at the moment, and are focused on changing the profiles of education of graduates of individual types of schools. The first of these interventions that we have frequently mentioned in the previous reports [see: Jelonek et al., 2011] concerned the promotion of the general educational path which is aimed to persuade more upper secondary schools students to continue education in HE institutions. The second intervention was designed to focus candidates to higher education in fields of study considered strategic (sciences). In this chapter, these interventions were the background for the analyses focused on studying the market situation of graduates of various types of HE institutions.

Concluding the considerations we want to focus on what we believe to be the most important subjects covered in this chapter. We have grouped them into two thematic areas: (1) conclusions related to the situation of upper secondary school leavers, and (2) conclusions describing the professional position of HE graduates. These conclusions will be preceded by a comparison of the general situation of graduates of individual types of schools drafted in the table below.

<sup>98</sup> In an ideal situation, we should be able to control not only the type of HE institution but also the fact of graduating from a specific institution.

**Table IV.18.**  
**Labour market situation of secondary school leavers and HE graduates**

Education profile	Working (BAEL)	Unemployed (BAEL)	Inactive (BAEL)
General (general secondary)	60.90%	16.20%	22.90%
Technical (technicians and other associate professionals after technical schools)	74.40%	14.00%	11.70%
Worker after a basic vocational school	68.30%	19.30%	12.40%
Services after basic vocational school	52.30%	18.30%	29.30%
Baccalaureate	63.80%	16.90%	19.30%
Engineer	76.50%	12.30%	11.10%
Master	80.70%	10.30%	9%
Master Engineer	85.30%	10.10%	4.60%

Source: BKL – Population Study 2010–2012.

The information presented above clearly points to a far better professional start of HE graduates, as compared to the people who finished education at lower levels. This start is not the same in the case of individual types of institutions and levels of education. First, the lower the level of education, the worse the market situation: it is enough to compare here the shares of unemployed young basic vocational school leavers with the analogous proportions among higher education graduates. Secondly, completing a technical secondary school ensures quite a sensible labour market situation: the share of the unemployed is lower than in the case of graduates of bachelor degree studies. The fact of holding the title of an engineer is a better guarantor of work than a bachelor's degree, yet completion of the second cycle studies ensures an even better situation in the labour market which, possibly surprisingly, is true both for engineering and non-engineering fields of study. The subjects mentioned above are presented in greater detail in the conclusions listed below.

Analysing the market opportunities of upper secondary school leavers, we arrived at the following conclusions:

1. While describing the situation of upper secondary school leavers in the labour market, it is necessary to pay attention to the diversity of the profile of education within a specific type of schools, e.g. technical secondary schools or basic vocational schools. It is so as they show significant differences in the shaping of the labour market situation of the people who completed them.
2. In the case of young people planning to enter employment, i.e. resigning from entering higher education after upper secondary school, the choice that offers the best "returns" are technical schools, and in these: the profiles of education counted (according to ISCO classification) into the technicians and associate professionals group.
3. Worker education after basic vocational school gives an opportunity of finding employment relatively quickly and provides relatively high remuneration, however, on condition that the profession learned is one in actual demand in the labour market. A hasty choice of worker occupations leads to unemployment, which relatively often is of the long-term type.
4. Relatively the most risky choice when it comes to the future situation in the labour market is the selection of the basic vocational school, and service occupations (especially cooks, sales workers, and hairdressers). The graduates of this group of occupations are relatively least often employed, moreover, a large share of them are inactive. Additionally, the salaries in this group of upper secondary school leavers are lowest.
5. Entering the labour market is more difficult in the case of young female secondary school leavers, moreover their situation in 2011 and 2012, as compared to young male leavers, deteriorated, featuring a drop in the value of the employment rate, and a sudden increase in the percentage of the unemployed among women, with a slight increase in both the indicators in the case of men.

6. The highest increase in the percentage of the employed in the group of young people without higher education can be observed from 2 to 3 years in the labour market. Moreover, the employment rates are higher for men than for women, and they also grow faster in the successive years in the labour market. Recorded in 2012 was a sudden and worrying increase in the proportion of the unemployed women in the youngest (according to the experience in the labour market) group of graduates (the proportion was by nearly 11 percentage points higher in 2012 than in 2011), while in the case of men from group 1, it remained at a nearly unchanged level. One can therefore draw the conclusion that deterioration of the situation in the labour market carries more serious consequences for the female than for the male school leavers.
7. General upper secondary school leavers who do not continue education “start” from a low starting point (with a relatively low rate of the employed, being similar to the rate characteristic of the basic vocational school leavers in service courses), yet in the following years in the market they improve their position at a pace is similar to that of the graduates of the remaining paths analysed. As a consequence, due to the low “starting point” they do not catch up, e.g. with the technical school leavers. It is therefore clearly visible that this path of education was profiled for the students continuing education at higher level.
8. Postsecondary and other vocational school leavers “start” from a level similar to that of the general secondary school leavers, yet with the increase of the period in the market, they make a huge “leap” moving (group 2 and above) to the categories with the highest rate of employment and the lowest proportions of the unemployed and the inactive.
9. Technical school leavers (technicians and other associate professionals) have the highest employment rate among those remaining in the labour market from 1 to 3 years, and in the later years, this category records a regular increase in the employment rate. Compared to technicians and other associate professionals, those who leave technical schools as representatives of the remaining occupations start from “a lower level” of employment, and reach high employment rates more slowly.
10. In the case of students who learnt skilled worker occupations at basic vocational schools, it is difficult to form unambiguous conclusions due to the large internal variety of the group, which includes both those who “start” from a higher level and systematically improve their labour market situation and those whose situation in the first years after leaving school is somewhat worse. At the same time, it is worth noting that characteristic of this group are relatively high earnings in the first year after leaving school, while in the successive years, they remain at a more or less stable level. Students who learnt service occupations at basic vocational schools are a group with characteristically low employment rates, growing slowly parallel to the time in the labour market, relatively high and slowly decreasing shares of the unemployed, and the highest shares of the inactive.

Analysing the market opportunities of higher education graduates, we arrived at the following conclusions:

1. The market situation of higher education graduates does not seem to be as dramatic as presented in the media (in 2011, the employment rate among young higher education graduates – aged 30 and below – was similar to the rate of employed with higher education in the entire population). It is worth adding that as far as the situation is not brightest in the first cohort leaving the market, with the successive years in the market, the occupational position of graduates improves significantly. On the other hand, 2012 brought deterioration of the situation of higher education graduates (an increase in the proportion of the unemployed): a fact related rather to the generally poor situation in the market than to deterioration of the situation in this specific group.
2. The moment of entering the labour market is the factor that significantly influences the opportunity of finding employment within two years from graduating from an institution of higher education – in the circumstances of deterioration of market situation, these groups will most certainly suffer most among all the HE graduates. Later, the remaining factors have a stronger impact on the market situation of the graduates.
3. Graduation from master degree studies gives a boost to students with bachelor's degree, while graduation from second cycle master degree studies does not bring as big a profit in the form of a drop in the unemployment rate in this group in the case of engineers. This means that the

market situation of young engineers is relatively good, and the fact of improving their qualifications by obtaining a second cycle studies diploma does not significantly increase their chances of having a job. In turn, in the case of students with a bachelor's degree, the odds are significantly increased by graduation from master degree studies. This conclusion is coherent with conclusions stemming from the analysis of job offers; as the authors of Chapter Two note, 2012 brought a disillusionment with graduates of bachelor degree studies employed on positions earmarked for professionals.

4. It is worth emphasising that general opinions concerning increasing the odds of employment for those who boast an engineer's degree are true, yet only when comparing the situation of students who completed first cycle studies: in their case, it pays much more to have an engineer's than a bachelor's degree. This regularity is not observed among the graduates of second cycle studies, as the unemployment rates in the groups of master degree holders with and without the title of an engineer are the same. This, naturally, does not mean that the position of the two groups in the market is the same, as the factor defining it could be (for example) the income.<sup>99</sup> Moreover, it must be remembered that in this chapter we monitored the situation in the market immediately after young people left higher education, and this situation may differ between engineers and non-engineers in the successive cohorts (e.g. by the fact of the engineers with master degrees obtaining professional licenses).
5. The type of studies (engineering/non-engineering) is not a factor significantly differentiating the incomes of the respondents; what does differentiate them however is the level (cycle) of studies completed: the employed graduates of second cycle studies earn significantly more than those who completed the first cycle. This difference results from the specific characteristics of the posts held, and the occupations of the graduates of the first cycle studies – they far less often work on positions earmarked for professionals, and far more often perform jobs that require only secondary education (e.g. services and sales workers). This may denote a certain type of “façade quality” of the division of studies into two cycles. This is true about the non-engineering fields of study, in whose case completion of the first cycle studies does not entitle to work in most professional jobs.
6. Unemployed graduates have fairly realistic remuneration-related aspirations, nevertheless, the salary that they would find fully satisfactory is usually higher than what the market offers them in practice. It can, therefore, be concluded that on the one hand, graduates can assess their earning potential realistically, yet on the other – this potential diverges strongly from the expectations they have. Remuneration-related aspirations are most strongly moderated by the respondent's sex: women earn less and their aspirations are overestimated, proportionally to the market reality. At the same time, with the successive years of remaining in the labour market, unemployed female graduates change their remuneration-related aspirations only to a small degree: in the first year after leaving education, their aspirations are similar to those of women who have been in the labour market for a number of years. This can be at testimony either to exaggerated assessment of earning potential in the group of women immediately after leaving education, which is verified in the later years by the labour market, or by the increase of remuneration-related aspirations of women from the youngest cohort.<sup>100</sup>
7. Characteristic of the graduates in fields of study defined as strategic is a better general situation in the market (lower percentage of the unemployed), yet not everyone in this group has equal opportunities. For example, most students graduating from mathematics, civil engineering, and physics do not encounter problems in finding work. At the same time, in this group, we may find fields of study in whose case a share of the unemployed is similar, if not higher, to that observed among the graduates of master courses (e.g. environmental engineering, environmental protection). Therefore, questions whether investment in each of the individual strategic fields of study is actually justified, and what impact these investments will have on the market situation of graduates of these strategic fields who now still encounter difficulties in finding employment are justified.

<sup>99</sup> Unfortunately, information about holding the degree of the engineer and – separately – master engineer had not been collected until the third round of the BKL Study.

<sup>100</sup> Unfortunately, we do not have data that would let us verify the level of aspiration of older cohorts at a time when they were in their first year from completion of higher education.

## Annex

**Table A1.**

**Comparison of the proportion of young people without higher education:  
working, unemployed, and inactive (according to BAEL) in 2011–2012  
in the administrative regions of Poland**

Region	Working 2011	Working 2012	Unemployed 2011	Unemployed 2012	Inactive 2011	Inactive 2012	W 2012–2011	U 2012–2011	I 2012–2011
Dolnośląskie	56.8%	57.1%	14.7%	19.6%	28.5%	23.4%	0.3%	4.9%	-5.2%
Kujawsko-pomorskie	54.9%	61.1%	19.6%	19.7%	25.5%	19.1%	6.2%	0.1%	-6.4%
Lubelskie	55.7%	53.3%	18.7%	25.0%	25.5%	21.7%	-2.4%	6.3%	-3.9%
Lubuskie	60.7%	58.9%	17.9%	20.5%	21.4%	20.5%	-1.8%	2.6%	-0.8%
Łódzkie	67.8%	55.6%	14.0%	25.4%	18.2%	19.0%	-12.2%	11.4%	0.8%
Małopolskie	62.4%	55.3%	18.3%	24.0%	19.4%	20.7%	-7.1%	5.8%	1.3%
Mazowieckie	75.1%	70.2%	12.2%	18.3%	12.7%	11.5%	-4.9%	6.0%	-1.1%
Opolskie	56.9%	66.2%	12.2%	13.5%	30.9%	20.3%	9.3%	1.3%	-10.6%
Podkarpackie	53.4%	45.4%	23.7%	36.2%	22.9%	18.4%	-8.0%	12.5%	-4.5%
Podlaskie	59.5%	47.8%	14.0%	28.4%	26.4%	23.9%	-11.7%	14.3%	-2.6%
Pomorskie	58.2%	60.1%	16.3%	19.6%	25.5%	20.2%	1.9%	3.3%	-5.2%
Śląskie	66.3%	59.9%	14.5%	18.4%	19.2%	21.6%	-6.4%	3.9%	2.5%
Świętokrzyskie	56.0%	51.5%	19.2%	20.6%	24.8%	27.9%	-4.5%	1.4%	3.1%
Warmińsko-mazurskie	54.9%	50.0%	19.7%	23.2%	25.4%	26.8%	-4.9%	3.5%	1.4%
Wielkopolskie	72.6%	69.6%	7.7%	14.6%	19.7%	15.8%	-3.1%	6.9%	-3.9%
Zachodniopomorskie	59.3%	52.8%	18.1%	21.6%	22.6%	25.6%	-6.5%	3.5%	3.0%
Total	62.6%	59.0%	15.6%	21.2%	21.7%	19.8%	-3.7%	5.6%	-1.9%

W – Working, U – Unemployed, I – Inactive.

Source: BKL – Population Study 2010–2012.

**Upper secondary school leavers and graduates of institutions of higher education in the labour market**

**Table A2.**

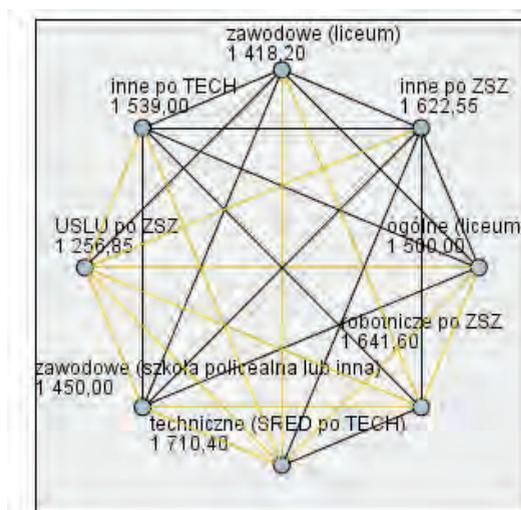
Selected data describing the situation in the labour market

Years	Employment rate (15–24)	BAEL unemployment rate (people at working age)	Unemployment rate among people aged 15–24	Average annual rate of GDP growth	Labour efficiency per one working person	Share of people aged 25–64 learning and training in the total population of people at that age in % (adults participating in education and training)
2003	19.6	20.1	43.0	3.9	57.8	4.4
2004	20.0	19.4	40.8	5.3	59.5	5.0
2005	20.9	18.1	37.8	3.6	59.4	4.9
2006	24.0	14.1	29.8	6.2	58.9	4.7
2007	25.8	9.8	21.7	6.8	60.1	5.1
2008	27.4	7.2	17.3	5.1	60.4	4.7
2009	26.8	8.3	20.6	1.6	63.5	4.7
2010	26.3	9.8	23.7	3.9	64.7	5.3
2011	24.9	9.8	25.8	4.3	66.8	4.5

Source: GUS – tracking indicators.

**Figure A1.**

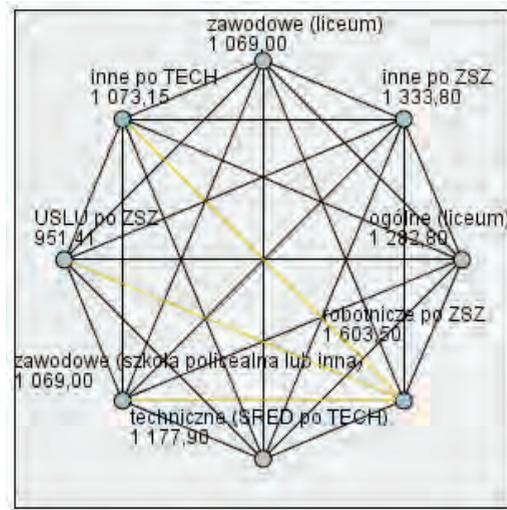
Statistical significance of differences between the median earnings, broken down by profiles of education of upper secondary school leavers covered by the 2011 and 2012 studies (p<0.05, the significant differences are marked in yellow)



Source: BKL – Population Study 2010–2012.

**Figure A2.**

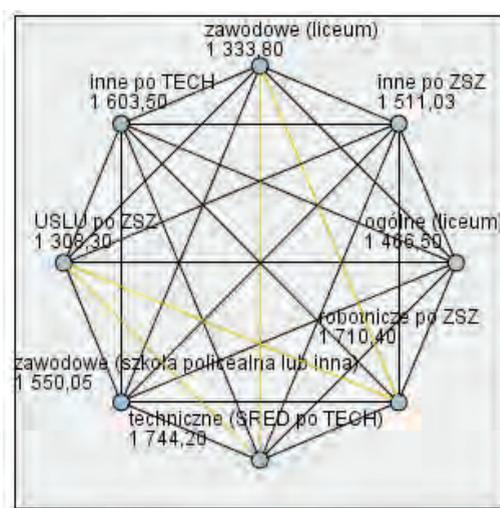
Statistical significance of differences between the median earnings, broken down by profiles of education of upper secondary school leavers (group 1: from 1 to 2 years from completion of education) covered by the 2011 study ( $p < 0.05$ , the significant differences are marked in yellow)



Source: BKL – Population Study 2010–2012.

**Figure A3.**

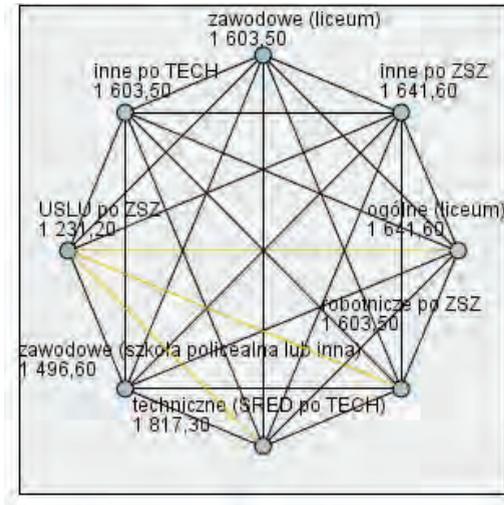
Statistical significance of differences between the median earnings, broken down by profiles of education of upper secondary school leavers (group 2: from 3 to 5 years from completion of education) covered by the 2011 study ( $p < 0.05$ , the significant differences are marked in yellow)



Source: BKL – Population Study 2010–2012.

**Figure A4.**

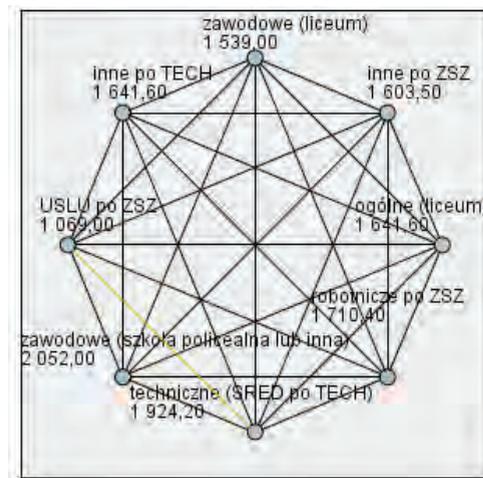
Statistical significance of differences between the median earnings, broken down by profiles of education of upper secondary school leavers (group 3: from 6 to 8 years from completion of education) covered by the 2011 study ( $p < 0.05$ , the significant differences are marked in yellow)



Source: BKL – Population Study 2010–2012.

**Figure A5.**

Statistical significance of differences between the median earnings, broken down by profiles of education of upper secondary school leavers (group 4: from 9 to 10 years from completion of education) covered by the 2011 study ( $p < 0.05$ , the significant differences are marked in yellow)

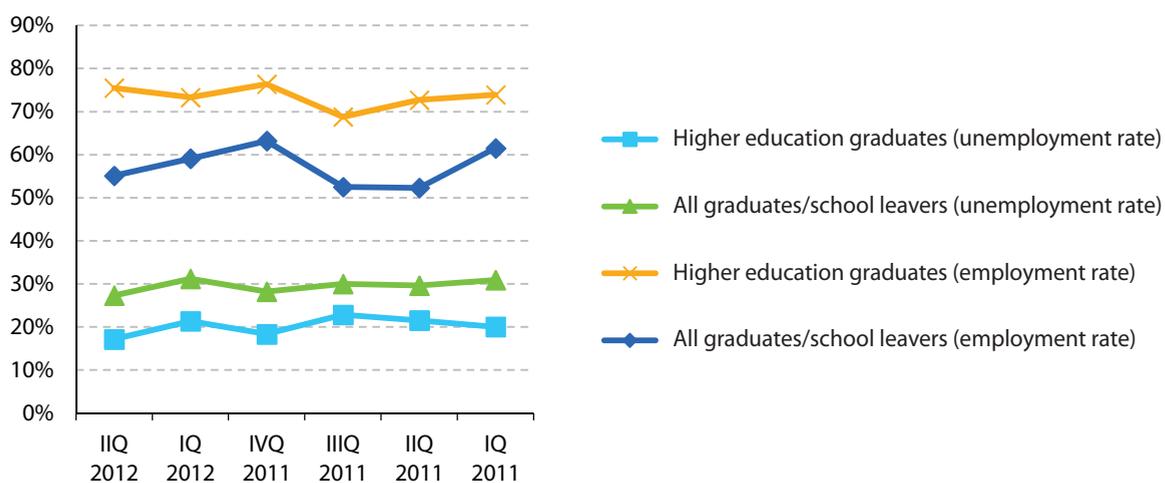


Source: BKL – Population Study 2010–2012.

**Table A3.****Basic features of the university graduates samples (2011 and 2012)**

Region	Frequency		%	
	2011	2012	2011	2012
Central	185	133	12.2	12.5
Wielkopolski	145	104	9.6	9.7
Śląski	206	138	13.6	12.9
Zachodni	187	129	12.4	12.1
Pomorski	177	118	11.7	11.0
North-eastern	185	107	12.2	10.0
Eastern	109	97	7.2	9.1
Małopolski	319	242	21.1	22.7
City	995	722	65.8	67.6
Country	518	346	34.2	32.4
Men	542	368	35.8	34.5
Women	971	700	64.2	65.5
Studies in various fields (sciences and humanist/social sciences)	80	54	5.3	5.1
Studies only sciences	304	187	20.1	17.5
Studies only humanities/social sciences	79	33	5.2	3.1
Studies in only one field in humanities/social sciences	325	272	21.5	25.5
Studies in only one field in sciences	663	496	43.8	46.4

Source: BKL – Population Study 2010–2012.

**Chart A1.****Unemployment rate and employment rate in the group of graduates according to BAEL (2011 and 2012)**

Source: Own materials based on BAEL (data amended according to NSP).

**Table A4.**

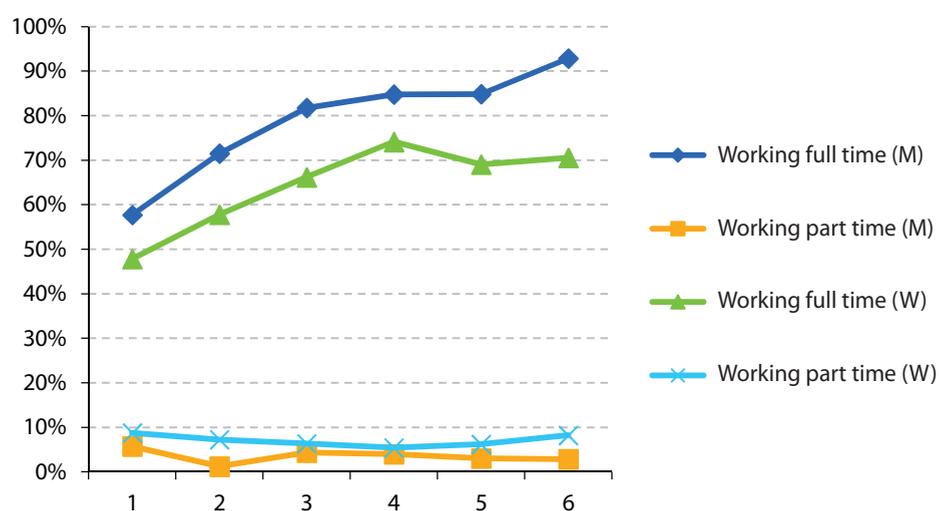
Market situation of higher education graduates (women and men) vs. the number of years since graduation ( $N_m=910$ ,  $N_w=1671$ )

Year of graduation	Working (M)	Working (W)	Working M – W
1	67.0%	60.6%	6.3%
2	75.8%	67.1%	8.6%
3	86.9%	75.0%	11.9%
4	89.4%	83.0%	6.4%
5	89.9%	78.3%	11.6%
6	97.1%	81.5%	15.6%

Source: BKL – Population Study 2010–2012.

**Chart A2.**

Percentage of people working full-time and part-time, broken down by the number of years since graduation from higher education and sex (combined 2011 and 2012 rounds of the study) ( $N_m=919$ ,  $N_w=1671$ )



Source: BKL – Population Study 2010–2012.

**Table A5.**

**The lowest salary in return for which higher education graduates would enter employment, and the salary considered relatively satisfactory vs. the respondent's sex, and type of studies completed**

Respondent's sex	Education	The lowest salary in return for which they would enter employment				Salary considered relatively satisfactory			
		N	Average	Median	Standard deviation	N	Average	Median	Standard deviation
Men	non-engineering	170	1969.71	1700.00	1075.319	171	2654.39	2500.00	1342.308
	engineering	60	2067.50	2000.00	697.078	60	2580.00	2500.00	924.580
	Total	230	1995.22	1800.00	990.147	231	2635.06	2500.00	1245.838
Women	non-engineering	311	1633.41	1500.00	521.868	320	2166.88	2000.00	660.136
	engineering	121	1844.05	1500.00	672.831	121	2359.50	2000.00	809.174
	Total	432	1692.41	1500.00	575.236	441	2219.73	2000.00	708.461
Total	non-engineering	481	1752.27	1500.00	780.324	491	2336.66	2000.00	981.258
	engineering	181	1918.12	1800.00	687.168	181	2432.60	2200.00	852.961
	Total	662	1797.61	1500.00	759.099	672	2362.50	2000.00	948.746

Source: BKL – Population Study 2010–2012.

# Literature

- Allianz** [2011], *Global Pension Atlas 2011*, Allianz Global Investors AG, Munich.
- Anxo D., Ericson T., Jolivet A.** [2012], *Working Longer in European Countries: Underestimated and Unexpected Effects*, "International Journal of Manpower", Vol. 33, Issue 6.
- Arking R.** [2006], *The Biology of Aging (3rd edn.)*, Oxford University Press, New York, NY.
- Berg G., Van der Deeg D., Lindeboom M., Portrait F.** [2009], *The Role of Early-life Conditions in the Cognitive Decline due to Adverse Events Later in Life*, Network for Studies on Pensions, Aging and Retirement, Tilburg.
- Blakemore A., Hoffman D. L.** [1989], *Seniority Rules and Productivity: An Empirical Test*, "Economica, New Series", Vol. 56, Issue 223.
- Błądowski P.** [2002], *Lokalna polityka społeczna wobec ludzi starych*, Szkoła Główna Handlowa, Warszawa.
- Casey B., Metcalf H., Lakey J.** [1993], *Human Resource Strategies and the Third Age Policies and Practices in the UK*, [in:] P. Taylor (ed.). *Age and Employment Policies Attitudes and Practice*, Institute of Personnel Management (IPM), London.
- Chen, D.H.C., Dahlman, C.J.** [2005], *The Knowledge Economy, the KAM Methodology and World Bank Operations*, The World Bank, Washington  
(source: [http://siteresources.worldbank.org/KFDLP/Resources/KAM\\_Paper\\_WP.pdf](http://siteresources.worldbank.org/KFDLP/Resources/KAM_Paper_WP.pdf))
- Chevalier A., Walker I.** [2001], *The United Kingdom*, [in:] C. Harmon, I. Walker, N. Westergaard-Nielsen (eds), *Education and Earnings in Europe: A Cross Country Analysis of the Returns to Education*, Edward Elgar, Cheltenham.
- Chłoń-Domińczak A.** [2009], *The Pension System and Employment of Older Workers: How to Change the Incentive Structure – the Polish Experience*, [in:] R. Holzmann, L. MacKellar, J. Repansek (eds), *Pension Reform in Southeastern Europe*, The World Bank, Washington DC.
- Clark T.** [2011], *Human Capital in Developing Countries*, [in:] A. Burton-Jones, J.-C. Spender (ed.), *The Oxford Handbook of Human Capital*, Oxford University Press, Oxford.
- Constant A., Tien B.** [2011], *Germany's Immigration Policy and Labor Shortages*, "IZA Research Report", No. 41.
- Czapiński J., Panek T.** [2011], *Diagnoza Społeczna 2011*, Rada Monitoringu Społecznego, Warszawa.
- Czarnik Sz., Strzebońska A., Szklarczyk D., Keler K.** [2011], *Polki i Polacy na rynku pracy*, PARP, Warszawa.
- Czarnik Sz., Turek K.** [2012], *Wykształcenie, praca, przedsiębiorczość Polaków*, PARP, Warszawa.
- Czeźnik M.** [2009], *Partycypacja wyborcza Polaków*, Instytut Praw Publicznych, Warszawa.
- Dearden L., McIntosh S., Myck M., Vignoles A.** [2002], *The Returns to Academic and Vocational Qualifications in Britain*, "Bulletin of Economic Research", Vol. 54.

- Engelhardt H., Buber I., Skirbekk V., Prskawetz A.** [2010], Social Involvement, Behavioural Risks and Cognitive Functioning among Older People, *Ageing & Society*, Vol. 30, Issue 5.
- Eurobarometer** [2011], *Active Ageing*, European Commission, available from: [http://ec.europa.eu/public\\_opinion/archives/ebs/ebs\\_378\\_fact\\_pl\\_en.pdf](http://ec.europa.eu/public_opinion/archives/ebs/ebs_378_fact_pl_en.pdf).
- Eurostat** [2011, 2012], data available from: [http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search\\_database](http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database).
- Goujon A., Samir K. C.** [2006], *Past and Future of Human Capital in Southeast Asia: From 1970 to 2030*, Vienna Institute of Demography, Working Papers 07/2006.
- Góra M.** [2008], *Retirement Decisions, Benefits, and the Neutrality of Pension Systems*, European Network of Economic Policy Research Institutes, ENEPRI Research Report, No. 51.
- GUS** [2011], *Szkoły wyższe i ich finanse*, GUS, Warszawa.
- GUS** [2012], *Aktywność ekonomiczna ludności Polski I kwartał 2012 r.*, GUS, Warszawa, available from: [http://www.stat.gov.pl/gus/5840\\_2189\\_PLK\\_HTML.htm](http://www.stat.gov.pl/gus/5840_2189_PLK_HTML.htm) (29.12.2012).
- Harmon C., Walker I.** [2000], *Returns to the Quantity and Quality of Education: Evidence for Men in England and Wales*, *Economica*, Vol. 67.
- Henkens K., Schippers J.** [2012], *Active Ageing in Europe: The Role of Organisations*, *International Journal of Manpower*, Vol. 33, Issue 6.
- Hoff A.** (ed.) [2010], *Population Ageing in Central and Eastern Europe. Societal and Policy Implications*, Surrey, Ashgate.
- Hogarth T., Wilson R.** [2001], *Skills Matter: A Synthesis of Research on the Extent, Causes and Implications of Skills Deficiencies*, Department for Education and Skills (DFES report SMSI), Nottingham.
- Jelonek M., Szczucka A., Worek B.** [2011], *Development of the Human Capital in Poland: Main Challenges*, [w:] *Study of Human Capital in Poland. Report concluding the 1st round of research conducted in 2010*, Polish Agency for Enterprise Development, Warsaw.
- Jelonek M., Szklarczyk D.** [2012a], *Kogo kształcą polskie szkoły? Analiza kierunków kształcenia w szkołach ponadgimnazjalnych i wyższych*, PARP, Warszawa.
- Jelonek M., Szklarczyk D.** [2012b], *Szkoły ponadgimnazjalne i wyższe w czasach niżu demograficznego*, [in:] *Bilans Kapitału Ludzkiego. Kompetencje jako klucz do rozwoju Polski. Raport podsumowujący drugą edycję badań „Bilans Kapitału Ludzkiego” realizowaną w 2011 roku*, PARP, Warszawa.
- Jelonek M., Szklarczyk D., Balcerzak-Raczyńska A.** [2012], *Oczekiwania pracodawców a pracownicy jutra. Na podstawie badań zrealizowanych w 2012 roku w ramach III edycji projektu Bilans Kapitału Ludzkiego*, PARP, Warszawa.
- Jurajda S., Munich D.** [2011], *Gender Gap in Performance under Competitive Pressure: Admissions to Czech Universities*, *American Economic Review: Papers & Proceedings*, Vol. 101, No. 3.
- Kalwij A., Vermulen F.** [2008], *Health and Labour Force Participation of Older*, *Health Economics*, Vol. 17, Issue 5.
- Kenny G. P., Yardley J. E., Martineau L., Jay O.** [2008], *Physical Work Capacity in Older Adults*, *American Journal of Industrial Medicine*, Vol. 51.
- Kocór M., Strzebońska A., Dawid-Sawicka M.** [2012], *Pracodawcy o rynku pracy*, PARP, Warszawa.
- Kunz J.** [2007], *Population Aging – Problem or Opportunity? Lessons from the Case of Finland*, *Journal of Sociology*, Vol. 1, available from: <http://www.scientificjournals.org/journals2007/articles/1077.htm>.
- Loretto W., White P.** [2006], *Employers' Attitudes, Practices and Policies towards Older Workers*, *Human Resource Management Journal*, Vol. 16, No 3.
- Lubinski D., Dawis R.** [1992], *Aptitudes, Skills, and Proficiencies*, [in:] H. Triandis, M. Dunnette, L. Hough (ed.) *Handbook of Industrial and Organizational Psychology* (Consulting Psychologist Press, 2nd ed.), Thousand Oaks, CA.

## Literature

- McGuinness S., Bennett J.** [2006], *Examining the Link between Skill Shortages, Training Composition and Productivity Levels in the Northern Ireland Construction Industry*, "International Journal of Human Resource Management", Vol. 17, No. 2.
- Młodzi 2011** [2011], *Młodzi 2011*, M. Boni (ed.), Kancelaria Prezesa Rady Ministrów, Warszawa.
- Munnell A. H., Sass S.** [2008], *Working Longer. The Solution to the Retirement Income Challenge*, Brookings Institution Press, Washington DC.
- NBP** [2012], *Badanie ankietowe rynku pracy. Raport 2012*, NBP, Warszawa.
- NYT** [2011], *As Germany Booms, It Faces a Shortage of Workers*, press article by J. Dempsey, The New York Times (February 4).
- OECD** [2011], *Pensions at a Glance 2011: Retirement-income Systems in OECD and G20 Countries*, OECD Publishing, available from: [http://dx.doi.org/10.1787/pension\\_glance-2011-en](http://dx.doi.org/10.1787/pension_glance-2011-en).
- OECD** [2012], *OECD Pensions Outlook 2012*, OECD Publishing.
- O'Leary N., Sloane P.** [2011], *The Wage Premium for University Education in Great Britain during a Decade of Change*, "The Manchester School", Vol. 79, No. 4.
- Oswick C., Rosenthal P.** [2001], *Towards a Relevant Theory of Age Discrimination in Employment*, [in:] M. Noon, E. Ogbonna (ed.), *Equality, Diversity and Disadvantage in Employment*, Palgrave, Hampshire.
- Ozawa T.** [2005], *Institutions, Industrial Upgrading, and Economic Performance in Japan: The 'flying-Geese' Paradigm of Catch-Up Growth*, Edward Elgar Publishing Limited, Cheltenham.
- Perek-Białas J., Ruzik A.** [2004], *The ACTIVAGE Project. WP 2 – Country Report Poland: Active Ageing and the Labour Market*, available from: [www.iccr-international.org/activage](http://www.iccr-international.org/activage).
- Perek-Białas J., Turek K.** [2011], *Starszy pracownik z punktu widzenia pracodawcy*, [in:] J. Mucha, Ł. Krzyżowski (ed.), *Ku socjologii starości*, Wydawnictwo AGH, Kraków.
- Perek-Białas J., Turek K.** [2012], *Organisation-level Policy towards Older Workers in Poland*, "International Journal of Social Welfare", Vol. 21.
- Pont B.** [2001], *Competencies for the Knowledge Economy*, [in:] *Education Policy Analysis*, Rozdział 4, OECD, Paris.
- Przewłocka J.** [2011], *Zaangażowanie społeczne Polaków w roku 2010: wolontariat, filantropia, 1%*, Stowarzyszenie Klon/Jawor, Warszawa.
- Raport o stanie** [2011], *Raport o stanie edukacji 2011. Kontynuacja przemian*, M. Federowicz, A. Wojciuk (ed.), Instytut Badań Edukacyjnych, Warszawa.
- Ruzik A., Perek-Białas J., Turek K.** [2013], *Did the Transition to a Market Economy and EU Membership have an Impact on Active Ageing Policy in Poland?*, [in:] R. Ervik, T. S. Lindén, *The Making of Ageing Policy: Theory and Practice in Europe*, Edward Elgar, Cheltenham (w druku).
- Schippmann J. S., Ash R. A., Battista M., Carr L., Eyde L. D., Hesketh B., Kehoe J., Pearlman K., Prien E. P., Sanchez J. I.** [2000], *The Practice Of Competency Modeling*, "Personnel Psychology", Vol. 53, Issue 3 (Autumn).
- SHARE** [2006–2007], *The Survey of Health, Ageing and Retirement in Europe*, data available from: <http://www.share-project.org/>.
- Silverstein M.** [2008], *Meeting the Challenges of an Aging Workforce*, "American Journal of Industrial Medicine", Vol. 51, No 4.
- Skirbekk V.** [2004], *Age and Individual Productivity: A Literature Survey*, [in:] G. Feichtinger (ed.), *Vienna year-book of population research*, Vol. 1 (1), Austrian Academy of Sciences Press, Vienna.
- Sławiński S.** (ed.) [2011], *Słownik kluczowych pojęć związanych z krajowym systemem kwalifikacji*, Instytut Badań Edukacyjnych, Warszawa, available from: [http://www.krk.org.pl/images/slownik\\_kluczowych\\_pojec.pdf](http://www.krk.org.pl/images/slownik_kluczowych_pojec.pdf).

- Sternberg R. J.** [1985], *Beyond IQ: A Triarchic Theory of Human Intelligence*, Cambridge University Press, New York.
- Strzebońska A., Dobrzyńska M.** [2011], *Kompetencje jako przejaw kapitału ludzkiego* [in:] Bilans Kapitału Ludzkiego w Polsce. Raport podsumowujący pierwszą edycję badań realizowaną w 2010 roku, PARP, Warszawa.
- Stypińska J., Perek-Białas J.** [2011], *Carers between Work and Care. Conflict or Chance? National Report Poland*. Carers@Work, available from: <http://www.carersatwork.tu-dortmund.de/download/National%20report%20PL.pdf>
- Szatur-Jaworska B.** [2000], *Ludzie starzy i starość w polityce społecznej*, Aspra-JR, Warszawa.
- Szatur-Jaworska B.** [2008], *Stan przestrzegania praw osób starszych w Polsce. Analiza i rekomendacje działań*, Biuro Rzecznika Praw Obywatelskich, Warszawa.
- Szczucka A., Turek K., Worek B.** [2012], *Kształcenie przez całe życie*, PARP, Warszawa, available from: [http://bkl.parp.gov.pl/system/files/Downloads/20121128143313/Kszta\\_cenie\\_przez\\_ca\\_e\\_ycie.pdf?1354109622](http://bkl.parp.gov.pl/system/files/Downloads/20121128143313/Kszta_cenie_przez_ca_e_ycie.pdf?1354109622).
- Taylor P. E., Walker A.** [1998], *Employers and Older Workers: Attitudes and Employment Practices*, "Ageing & Society", Vol. 18, No. 6.
- Tilak J. G. G.** [2002], *Building Human Capital in East Asia: What Others Can Learn*, The World Bank, Washington DC.
- Turek K.** [2011], *Aktywność społeczna osób starszych w Polsce. Trzeci sektor seniorów*, [in:] J. Mucha, Ł. Krzyżowski (ed.), *Ku socjologii starości*, Wydawnictwo AGH, Kraków.
- Turek K., Czarnik Sz.** [2012], *Wpływ poziomu wykształcenia na karierę zawodową*, [in:] Bilans Kapitału Ludzkiego. Kompetencje jako klucz do rozwoju Polski. Raport podsumowujący drugą edycję badań „Bilans Kapitału Ludzkiego” realizowaną w 2011 roku, PARP, Warszawa.
- Warr P.** [1994], *Age and Employment*, [in:] H. Triandis, M. Dunnette, L. Hough, (eds), *Handbook of Industrial and Organizational Psychology* (2nd edn), Consulting Psychologist Press, Thousand Oaks, CA.
- Wei Z., Richardson W.** [2010], *Are Older Workers Less Productive? A Case Study of Aged Care Workers in Australia*, "The Economic Record", Vol. 86, Special Issue.
- Willis S.** [1996], *Everyday Cognitive Competence in Elderly Persons: Conceptual Issues and Empirical Finding*, "The Gerontologist" Vol. 36, No. 5.
- World Bank** [2012], *KAM 2012*, available from: [www.worldbank.org/kam](http://www.worldbank.org/kam).
- Zaidi A.** (ed.) [2012], *Active Ageing Index 2012*, European Centre for Social Welfare Policy and Research, Vienna, available from: [http://www.euro.centre.org/data/1356002554\\_9393.pdf](http://www.euro.centre.org/data/1356002554_9393.pdf).

# Methodological Annex

This part of the report presents synthetically the main assumptions of the studies: the description of the procedure of implementation of individual research modules (employer study, job offers study, population study, and training firms and institutions study), the key notions used throughout the project (competencies, qualifications, occupations/jobs), and a description of the way some data are presented (uniform for all the modules). We hope that the descriptions presented below will help in understanding the presented results and in clearing possible doubts concerning the definitions made and followed.

## Conducting the studies

### *Employer Study*

The study in which representatives of employers were involved was conducted in the spring of 2012, from 22nd July to 31st May. In the previous rounds, the studies were conducted from 17th August to 10th December 2010 (the first round), and from 29th March to 29th June 2011 (the second round). Thus, the study covered the period of two and half years, which gives a good starting point for verifying the situation in the labour market. The studies were conducted by Millward Brown SMG/KRC. During the current round, responses came from 16,000 employees. The study was conducted in multi-mode approach, making it possible for the researcher to contact the respondents in a variety of ways: personally, over the phone, and online. Due to the specific nature of the study, the main technique was telephone interview, used efficiently in the case of 97% of respondents. The remaining results were acquired through computer-assisted personal interviews (CAPI, 2% of the interviews) and computer assisted web interview (CAWI, 1% of the interviews).

Worth emphasising is the fact that participating in the studies were employers as such, and not only entrepreneurs, that is representatives of businesses currently operating in the market that employed at least one person at the time of the field study. The employer study did not account for the self-employed who participated in a different module in the Study of Human Capital in Poland (BKL) project, that is in the study conducted on a random sample of population. Excluded from the population of the employers in this study were also entities operating in a number of sections of NACE (Polish classification: PKD2007): agriculture, forestry, hunting, and fishery, together with the entire public administration and national defence, obligatory social insurance, households and farms employing staff, households producing goods and services for own needs, extraterritorial organisations and teams, foundations and member-based organisations, churches and other denominational unions, associations and other civic organisations, political parties, trade unions, employer organisations, occupational and economic authorities, housing communities, and unions of groups of agricultural producers. A precise study of the firms and institutions operating in these highly specific sectors and specific types of businesses was impossible due to the specified size of the sample.

### *Job Offers Study*

The module investigating the positions offered gathered 21,594 unique job offers, valid on 26th March 2012 (third week of March) from all the 16 administrative regions of Poland. Considered unique were the offers that concerned recruitment to an individual position, were published on a specific day, and were unique across all the sources. Excluded from the collected offers were those advertising internships and residencies for students of secondary school and higher education, and positions offered abroad.

The sources of the offers collected for research were:

- County Labour Offices (PUPs)
- [www.careerjet.pl](http://www.careerjet.pl): a national online job brokerage portal (a generator of links to electronic ads published in various online job brokerage sources).

The offers collected were coded by two independent coders to ensure appropriate validity of the process, and only thus designed database provided the grounds for the analyses.

### *Population Study*

The third round of the BKL Population Study was conducted from 22nd February to 22nd May 2012. To reiterate: the studies of the first round were conducted from 28th July to 23rd November 2010, and of the second round – from 22nd February to 22nd May 2011. They were all conducted by Millward Brown SMG/KRC.

Altogether 17,600 interviews were conducted in CATI and PAPI (paper and pencil interview) methods during the study. The population in the question were people of working age, that is women aged from 18 to 59 and men aged from 18 to 64, residing in Poland during the study. The contact data came from the Polish Universal Electronic System for Registration of the Population (PESEL) register.

The drawing of subjects to the study was of stratified proportional type. The strata were based on the subregions defined by the Central Statistical Office (GUS, the country is divided into 66 subregions), and GUS town-size classes (9). The sample for the study was drawn as 16 independent regional samples with the target count of 1100 interviews in each sample. The same success rate of 60% was assumed for each region, which is why 2000 records were drawn in each region. To streamline the execution of the sample, the records were drawn in batches of 10 records in each administrative unit (city/rural commune).

The people drawn received introductory letters, and later – after a specified period of time – the interviewers visited the places of residence of the potential respondents. Should a meeting be impossible, the interviewer made a different appointment. 16,457 interviews (93.51% of the entire completed sample) were conducted in this way. The interviewers presented a letter of recommendation from the PARP, and an information leaflet about Millward Brown SMG/KRC and the study.

Towards the end of the study, when – despite the interviewers returning to the listed addresses – they could not carry out the assumed number of the interviews, random route technique (local selection of addresses in the field) was applied to top up the intended numbers of the interviews. The method was applied in all the size classes of localities, especially in the towns of above 10,000 residents (due to the low study success rate). Random route methodology was used for 6.429% of interviews (i.e. covered 1143 respondents).

The response rate throughout the sample was 55%, and was as follows in the following subcategories:

- was at a similar level in all the administrative districts
- was varied in the individual locality size classes (though less than in previous years); the response rate in the country was visibly smaller (56% currently, as compared to 64% in 2011), while the study success rate was higher in Warsaw (current 56% compared to 46% in 2011); the rate was slightly higher among women, and in the youngest (18 – 25) and oldest (50 – 59) age cohorts.

Only 59% of the interviews were conducted during the first visit. Usually the reason not to carry out the interview was the categorical refusal to participate in the study (12.1%) or the fact that the person drawn moved out for a period exceeding three months (11.4%).

### *Study of training companies and institutions*

The third round of the study of training companies and institutions was carried out from 22nd February to 22nd May 2012. The studies used two methods of contacting the respondents, i.e. computer assisted telephone interview (CATI) and computer assisted web interview (CAWI). CATI was used for 4250 interviews (94%), and CAWI for 254 (6%). Altogether, the study of training companies and institutions in 2012 encompassed 4504 interviews. The study was performed by Millward Brown SMG/KRC.

Like in the previous rounds, the study covered the institutions and businesses that:

- run a form of activity that lies, according to NACE, in the area of lifelong training of adults, including non-school forms of education in driver and pilot training, non-school forms of education not elsewhere classified, and teaching of foreign languages; after consultations with the representatives of the training community, firms and institutions whose activity encompasses consulting related to management were also included
- do not list training and consulting as the main area of their work, yet declare provision of training services through appropriate entries in registers and databases for the training sector; among such registers were e.g. Rejestr Instytucji Szkoleniowych (RIS, literally: the register of training institutions) and the inwestycjawkadry.pl database managed by PARP
- confirmed that they conducted training or consulting work in the procedure of verification performed by phone or online.

## **Weighting of data**

### *Employer study*

The weighting of the sample of employers was performed to compensate for non-identical probability of individuals from the population entering the sample resulting from the assumed sampling plan: the sample was drawn (with the exclusion of the 9,900 largest enterprises that were a stratum with internal probability of members being entered equal to 1) in the same count (1435) in each region in strata defined by the number of employed: up to 9, from 9 to 49, and from 50 to 249 (with the exclusion of the businesses that were used to complement the stratum of the largest employers, taken from the last of the three categories mentioned above), proportionally to the share of these strata in the populations of the regions, with the exception of the stratum of 0 to 9 employees, whose proportion in the sample taken from every region amounted to half of its participation in the population from the region. The records that originally corresponded to the subclass of “up to 9” employees were drawn from the two remaining subclasses, proportionally to their share in the population of the region. The decrease in the proportion of the stratum of the smallest enterprises resulted from its domination in the population, and the intention to acquire a better representation of larger businesses.

Despite the efforts of the firm conducting the studies in the field, only some businesses participated. Compensating for the non-identical probability of the execution of the division into the six categories of the NACE developed especially for the needs of the weighting, a division was included in the set of stratifying variables. The assignment of more detailed NACE categories to the six classes was based on the analysis of combinations maximising the differentiation between the classes of the key variables analysed in the studies.

The final calculation of weights was conducted so that their proportion in a sample of combinations of the strata (region and the “number of employees” class) with the six NACE classes corresponded to their proportion in the sampling frame which was the best currently available version of the register of businesses active in Poland at the time when the study was conducted (GUS). Population-related weights were calculated to allow population counts and the standardised weights adding up to the count of the sample to be estimated during the analyses. For the needs of estimating the number of the employees needed, it was assumed that the cases with extreme declared numbers of employees sought would have their population weights set to the level of 1. The upper so-called Tukey’s jackknife, i.e. a variance estimator with a value equal more or less to the upper quartile, increased by the doubled interquartile range (a way of defining the extreme values well-known in statistics, used among others for the generation of diagnostic box plots and stem-and-leaf plots) was approved as the criterion of extremity. The upper Tukey’s jackknife was calculated separately for each stratum of enterprises listed above in terms of the number of employed.

Characteristic of the weights acquired in this manner is a high variance in the situation of global estimations at the level of the entire country. The variance of the weights drops substantially when the analysis is conducted at the level of regions and in the categories of business size. Thanks to this, in the case of investigations within these categories, the small size of the sample is to a certain degree compensated for by a smaller loss of precision caused by the variance of weights. In the case of analysis at the national level, the mechanism operates in the opposite direction.

### *Population study*

Post-stratification weights were a combination of weights resulting both from the sampling system (non-identical probability for the individual regions) and the success rate in individual groups, and weights correcting the sample distribution as compared to the population distribution in the breakdown into region, age, and sex.

## **Classifications applied**

### *Competencies*

One of the goals behind the study was to point to the competencies that are needed in the market and to define the level of individual competencies of the (current and potential) employees. In the sense assumed for the BKL Study, competency denotes knowledge, skills, and attitudes connected to the performance of specific activities, independent of the way of their acquisition and their potential corroboration through a validation procedure. In the case of occupation-related activities connected to the performance of a specific job, we speak of occupational competencies. During the conceptual work, a differentiation into 12 general competency classes referring to various realms of labour was made:<sup>101</sup>

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<sup>101</sup> The proposed classification of competencies was prepared after an analysis of various approaches to occupational competencies used by various institutions throughout the world: from institutions dealing with statistical data (e.g. Australian Bureau of Statistics), via businesses focusing on building competency standards (e.g. the Polish Krajowe Standardy Kasyfikacji Zawodowych / National Standards of Occupational Classification), to the enterprises responsible for the development of occupational competencies (e.g. O\*NET. The Occupational Information Network). A full description of the developed classification is found in the report concluding the first round of the BKL Study.

## Methodological Annex

Competence	abbr	Phrase in the questionnaire
Artistic	→ <b>ART</b> →	Artistic and creative skills
Office	→ <b>OFF</b> →	Organising and running office work
Availability	→ <b>AVL</b> →	Availability
Physical	→ <b>PHY</b> →	Physical fitness
Interpersonal	→ <b>PER</b> →	Contacts with other people
Language	→ <b>LANG</b> →	Fluent command of Polish spoken and written
Managerial	→ <b>MNG</b> →	Managerial skills and organisation of work
Cognitive	→ <b>COG</b> →	Finding and analysing information, and drawing conclusions
Computer	→ <b>COM</b> →	Handling computer and using the Internet
Mathematical	→ <b>MAT</b> →	Performing calculations
Self-organisational	→ <b>SLF</b> →	Self-organisation of work and showing initiative, timeliness
Technical	→ <b>TEC</b> →	Handling, assembling, and repairing devices

The 12 competency classes are present in all the studies. In the population study respondents were asked to self-assess their level of each competency, while employers were asked whether a given competency is required in the case of the employees they sought for a vacancy, and if so – at what level. In the population study some of the classes described above were additionally divided into a number of subcategories (e.g. the mathematical competencies were divided into the skills of making simple and advanced mathematical calculations).

### *Occupations*

In all the research modules, occupational categories were defined in line with job classification developed by the International Labour Organisation (ILO) in the ISCO–08 version. All the jobs were coded according to the key of occupations contained in the standard. The report makes use of two levels of categorisation, namely the major groups (the most general division into 9 job groups) and the sub-major groups (division into 40 more detailed groups of occupations). For practical reasons, the following system was used:

**International Standard Classification of Occupations (ISCO) – levels 1 and 2**

Level 1		Level 2	
1 MANA	Managers	11 Chief executives, senior officials and legislators 12 Administrative and commercial managers 13 Production and specialized services managers 14 Hospitality, retail and other services managers	
2 PROF	Professionals	21 Science and engineering professionals 22 Health professionals 23 Teaching professionals 24 Business and administration professionals 25 Information and communications technology professionals 26 Legal, social and cultural professionals	
3 ASSO	Technicians and other associate professionals	31 Science and engineering associate professionals 32 Health associate professionals 33 Business and administration associate professionals 34 Legal, social, cultural and related associate professionals 35 Information and communications technicians	
4 CLER	Clerical support workers	41 General and keyboard clerks 42 Customer services clerks 43 Numerical and material recording clerks 44 Other clerical support workers	
5 SERV	Service workers and sales workers	51 Personal service workers 52 Sales workers 53 Personal care workers 54 Protective services workers	
6 AGRI	Skilled agricultural, forestry and fishery workers	61 Market-oriented skilled agricultural workers 62 Market-oriented skilled forestry, fishery and hunting workers 63 Subsistence farmers, fishers, hunters and gatherers	
7 CRAF	Craft and related trades workers (skilled workers)	71 Building and related trades workers, excluding electricians 72 Metal, machinery and related trades workers 73 Handicraft and printing workers 74 Electrical and electronic trades workers 75 Food processing, wood working, garment and other craft and related trades workers	
8 OPER	Plant machine sampling operators and assemblers	81 Stationary plant and machine sampling operators 82 Assemblers 83 Drivers and mobile plant sampling operators	
9 ELEM	Elementary occupations (Unskilled workers)	91 Cleaners and helpers 92 Agricultural, forestry and fishery labourers 93 Labourers in mining, construction, manufacturing and transport 94 Food preparation assistants 95 Street and related sales and service workers 96 Refuse workers and other elementary workers	



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**Polish Agency for Enterprise Development (Polska Agencja Rozwoju Przedsiębiorczości, PARP)** is a governmental Agency reporting to the Minister of Economy. It was established on the power of the Act of 9th November 2000. The task of the Agency is to manage funds received from State Treasury and the European Union allocated to manage entrepreneurship and innovativeness, and development of human resources.

For over a decade, PARP has supported entrepreneurs in implementing competitive and innovative projects. The goal of the Agency is to conduct programmes aimed at developing economy, supporting innovation and research activity in small and medium-size enterprises (SMEs), regional development, growth of export, development of human resources, and the use of new technologies.

**The mission of the Agency** is to establish favourable conditions for sustained development of Polish economy by supporting innovation and international activity of businesses, and promotion of environmentally friendly forms of production and consumption.

In the financial perspective 2007–2013, PARP is responsible for the implementation of tasks in three operational programmes: **Innovative Economy, Human Capital,** and **Development of Eastern Poland.**

**The Centre for Evaluation and Analysis of Public Policies at the Jagiellonian University (CEiAPP UJ)** was established in 2008 as an autonomous university research and development unit. The main area of its operation is collaboration with public administration – both central and regional – in the scope of evaluation and analysis of public policies and their methodology. The activity of the Centre covers educational services, conducting scientific and applied research, and expert and analytical studies focused primarily on the sector of public administration at various levels.

During the few years of the Centre's operation, its staff and experts have conducted a number of projects for the institutions of central administration: Ministry of Regional Development, Ministry of Finance, Chancellery of the President of the Council of Ministers, Polish Agency for Enterprise Development, and Pracodawcy RP. In that period, the Centre has also collaborated with regional institutions – the Regional Employment Office in Kraków, the Office of the Marshal of Małopolska Region and other scientific and research centres, including the University of Economics in Kraków, Małopolska School of Public Administration, and the Regional Statistical Office in Kraków.

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