

## MEGATRENDS – CHALLENGES AND THREATS FOR THE CONTEMPORARY LABOUR MARKET

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**Abstract:** The paper presents results of the nationwide questionnaire survey of trade unions on the five leading megatrends: automation, decarbonisation, demography, digitisation, globalization. The aim was to investigate and complete analysis of the labour market participants' competences and the attitudes to the key problems of the contemporary world.

**Keywords:** labour market, trends, challenges.

### 1. Introduction

Megatrends are interconnected trends that affect societies, culture and the economy globally. In the modern world, they perform an extremely important cognitive function. They mean fundamental trends that are transforming society and the economy globally. Maybe every day we do not see them directly, but this change happens with our participation. Sometimes they are related to the introduction of new technologies, and sometimes new legal regulations, forcing a change in thinking about the world, including also work and competences.

It was John Naisbitt who was one of the first to describe megatrends as the identification of socio-economic or structural processes that are slowly forming, but once they occur, they influence all areas of life for some time (Naisbitt, 1982, 1990). These new game rules are changing the way the world works. The basic features of megatrends include a longer time horizon, range of impact and power of impact. Companies, people - are part of the changes that were unimaginable a few years ago.

Knowledge of megatrends is very important because it determines in which direction the economy will go and what will be its driving force in the coming years. Technology-based innovation, the increasingly common digitization of all sectors are changing our lifestyle, offering enormous opportunities, but at the same time creating new challenges.

In all, well known reports (EY, 2018; Deloitte, 2017; PWC, 2016; WiseEuropa, 2017) describing modern megatrends, similar trends of change can be observed, including the globalization processes, sustainable development combined with care for natural resources, deep technological changes, progressing urbanization and demo- and geopolitical changes. That is why 5 key megatrends were selected for analysis within the project, which have and will be of particular importance for transformations in the labour market. They are the following:

- Automation,
- Digitisation,
- Decarbonisation,
- Demography,
- Globalization.

## 2. Methodology

This article presents selected, the most important results from the survey carried out at the Central Mining Institute in June 2019, at the request of the "KADRA" Trade Union as part of the project "Competent trade unionist – how to support employees in the labour market change processes". The CAWI, Computer Assisted Web Interview type survey was applied, using a web-based survey (Batorski, Olcoń-Kubicka, 2006, p. 99-131). The survey questionnaire contained 25 substantive questions and 4 metric questions. The questions were symmetrically divided into 5 research areas related to the five selected megatrends.

The substantive questions were closed and semi-open and they were mostly questions about opinions. They related to the way the respondents perceive certain facts, phenomena, processes, to assess them and their own possible behaviour towards them. Some of the questions were multiple-choice questions. This particularly concerned the course of key processes characteristic of a given megatrend. In some thematic blocks, there were questions with an indicated cafeteria of answers, the construction of which was based on the Likert scale, dedicated to assessing the importance of distinguished subcategories (Babbie, 2005, p. 281-282). In these questions, a five-grade rating scale (ordinal scale) was used, from very high significance to irrelevance.

The minimum sample size covered by the CAWI survey was set at  $N = 200$  people. While creating the random report, the Customer's potential was used. The respondents have been selected in such a way that the collection was the most valuable source of information about the studied phenomenon. The research included participants of social dialogue institutions, employees and trade union activists of the "KADRA" Trade Union and the Trade Union Forum,

participating in the work of social dialogue bodies. In total, 211 responses were received from the respondents, which is an extremely high level of the responses in the research.

### 3. Results of the study

In response to the noticed regularities of the megatrend regarding automation, the first question in surveys focused on assessing its impact on the domestic labour market. 80% of the respondents said that automation is an opportunity, 14% - a barrier, and 6% of the respondents answered: "I do not know". Equally positive, the respondents perceive automation in the context of assessing the effects of the automation of industrial processes in relation to jobs. 60% of the respondents believe that this will contribute to the creation of new, better-paid jobs, and 32% believe that it will increase unemployment. The above percentage distribution of answers entitles to state that in the assessment of the dominant percentage of study participants, automation will determine the process of positive changes in the labour market, focusing on the creation of new and better-paid jobs. Another cognitive area was the issue of job loss as a result of automation processes. 59.8% of the respondents believe that automation threatens job loss mainly for low-skilled employees, whose professional duties are uncomplicated and can easily be replaced by machines. 34% of the respondents are of the opinion that automation threatens job loss also for highly-qualified employees. 62% of the respondents also said that it would contribute to the process of allocating employees to new jobs and tasks. 31% of the respondents are of the opinion that it will affect the decline of employment in some sectors and professions, and 14% have no opinion on this issue.

In relation to the next megatrend, the basic question concerned the assessment of the impact of digitization of the economy on the number of jobs. The distribution of responses indicates fear of the digitization process. 55% of the respondents believe that digitization will reduce the number of jobs, and only 32% of respondents believe that the number of jobs will increase.

The next question was an attempt to assess the biggest challenges facing companies wanting to carry out digital transformation. Each of the respondents could give a maximum of two answers. The assessment of the challenges is presented in Table 1.

**Table 1.**

*The biggest challenges facing companies wanting to carry out digital transformation (N=211)*

Type of challenges	Number of indications	%
Insufficient digital competence of the team	104	30.3
Insufficient managerial competence of the management staff	94	27.4
Too low funds allocated to the technological development of the company	143	41.7
Other	2	0.6

In the respondents' opinion, the main challenge facing Polish entrepreneurs are too low financial resources allocated for the technological development of the company, indicated by nearly 42% of the respondents. Every third respondent also pointed out the insufficient competences of both the team and the management. The obtained results indicate that the digitization of industrial processes in the opinion of the research participants determines the increase in competitiveness of the domestic economy, as evidenced by 63.5% of the responses. 55% of the respondents believe that they will reduce the number of jobs, and according to every third respondent, digitization contributes to creating better-paid jobs.

The problem of the demographic changes was another important area. 80% of the respondents believe that the main source of the demographic changes is a decrease in the average number of children in the family, and 64% indicate the disappearance of families having a large number of children. 87% of the respondents believe that the inclusion of aging in all national policy programs is crucial for adapting society and the economy to the demographic changes.

The respondents were also asked to evaluate nine activities in the area of contemporary social policy and the labour market, and their importance for minimizing the effects of the demographic changes. The obtained results of the assessments are presented in Table 2.

**Table 2.**

*The activities in the area of contemporary social policy and the labour market by the level of importance for minimizing the effects of the demographic changes*

Item	Very high importance	High importance	Moderate importance	Low importance	Not relevant	Level of importance
1	45.5%	41.1%	10%	2.9%	0.5%	86.6%
3	44.9%	41%	12.5	15%	0.5%	85.9%
2	43.4%	39%	14.6%	2.9%	0%	82.4%
4	49.8%	32.5%	13.3%	3.9%	0.5%	82.3%
7	43.3%	38.9%	14.3%	3.4%	0%	82.2%
5	45.3%	35.5%	15.8%	3.4%	0%	80.8%
6	35.5%	37.4%	25.1%	1.5%	0.5%	72.9%
8	32.7%	36.7%	24.6%	5%	1%	69.4%

Legend for tab. 2: 1. Incorporating aging into all policy (government) programs to adapt to society and the economy to the demographic changes and to build a society accessible to all ages. 2. Supporting sustainable economic growth, the positive effects of which would be felt by all social groups. 3. Adaptation of the labour market, services, and social infrastructure to the demographic changes and forecasts. 4. Adaptation of the social security system to the ongoing and expected demographic changes (construction of the system of services and care in the place of residence, insurance for old age, etc.). 5. Striving to ensure a good quality of life and independence for people of all ages. 6. Striving for further development of lifelong education so that the education system reflects the change in economic, social and demographic conditions. 7. Assurance of full integration and participation of older people in society, with a particular focus on the role and needs of elder women. 8. Supporting elder people in the family, promoting inter-generational solidarity.

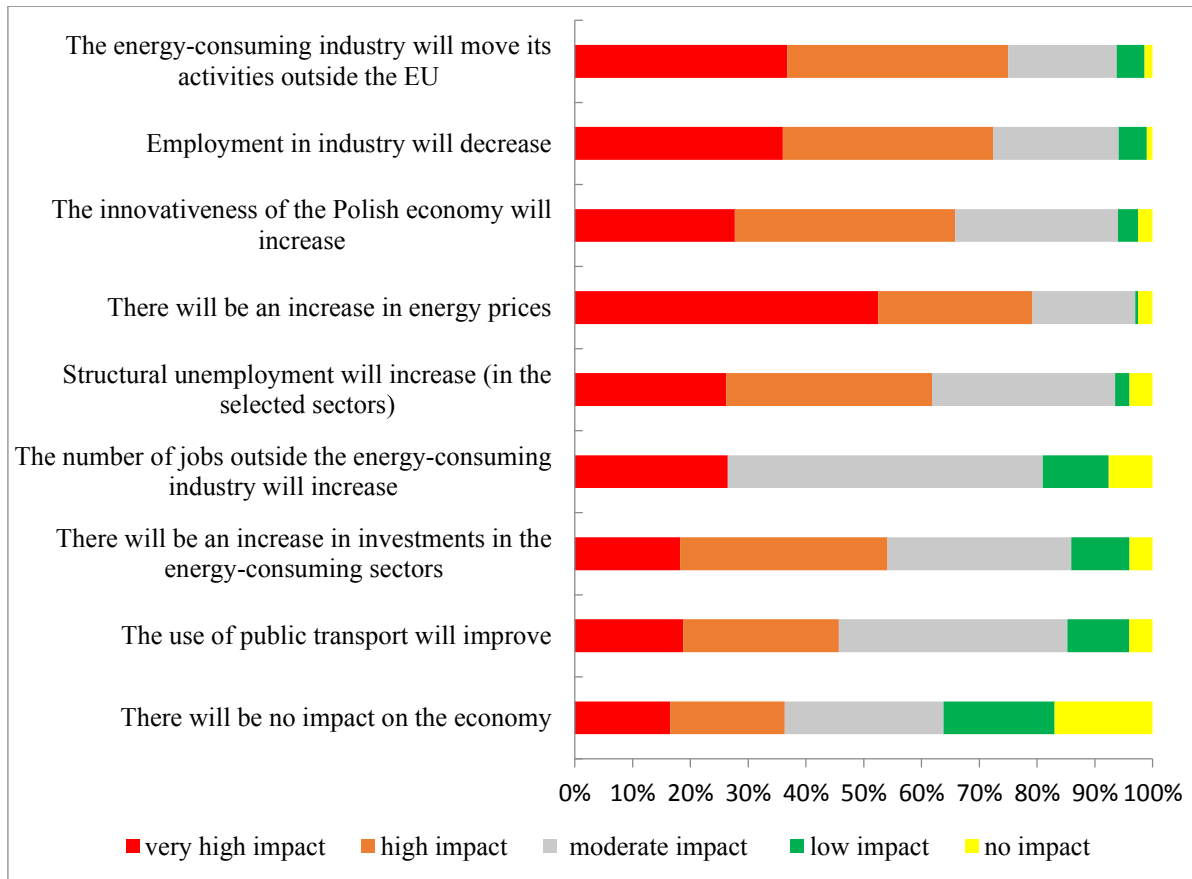
As you can see, the research participants included activities, in the area of the contemporary social policy and the labour market, of great importance for minimizing the effects of the demographic changes, which, in the opinion of the research participants, are:

- integrating aging in all policy (government) programs to adapt society and the economy to the demographic changes, and to build a society accessible to all ages,
- adaptation of the labour market, services, and social infrastructure to the changes and demographic forecasts.

A question was also asked that referred to the assessment of cultural and social processes, affecting the shape of the future structure of the population living in Poland. The selection of four processes was made on the base of the latest literature in the area of the demographic changes. The obtained results clearly indicate that such processes include a decrease in the importance of marriage as a form of human coexistence in favour of cohabitation – 57% of the indications, and the transition from preventive contraception to conscious procreation – 50% of the indications. It should be noted that 46% of the respondents believe that in Poland it is not possible to reverse the demographic trends, and 44% believe that there are such opportunities.

Decarbonisation and its impact on the Polish economy was another megatrend studied. In this regard, 58% of the respondents believe that this impact will be negative, and at the same time, only 50% of the respondents believe that it will contribute to reducing global carbon dioxide emissions, 44% of the respondents believe that such a policy will not affect CO<sub>2</sub> emission globally. The respondents were also asked to assess the impact of decarbonisation on specific sectors of the economy. This particularly applies to the industrial sectors such as energy, mining and the other energy-consuming industries which are affected to the greatest extent by instruments and tools of the decarbonisation policy. 94% of the respondents believe that the effects of the decarbonisation policy will be felt most by mining, 89% of the respondents point to the power production industry, and 86% of the respondents to the steel industry. According to the respondents, the healthcare sector is the least exposed to this impact: 39.3% of the responses – moderate impact, 14.4% of the responses – low impact, and 6% - no impact.

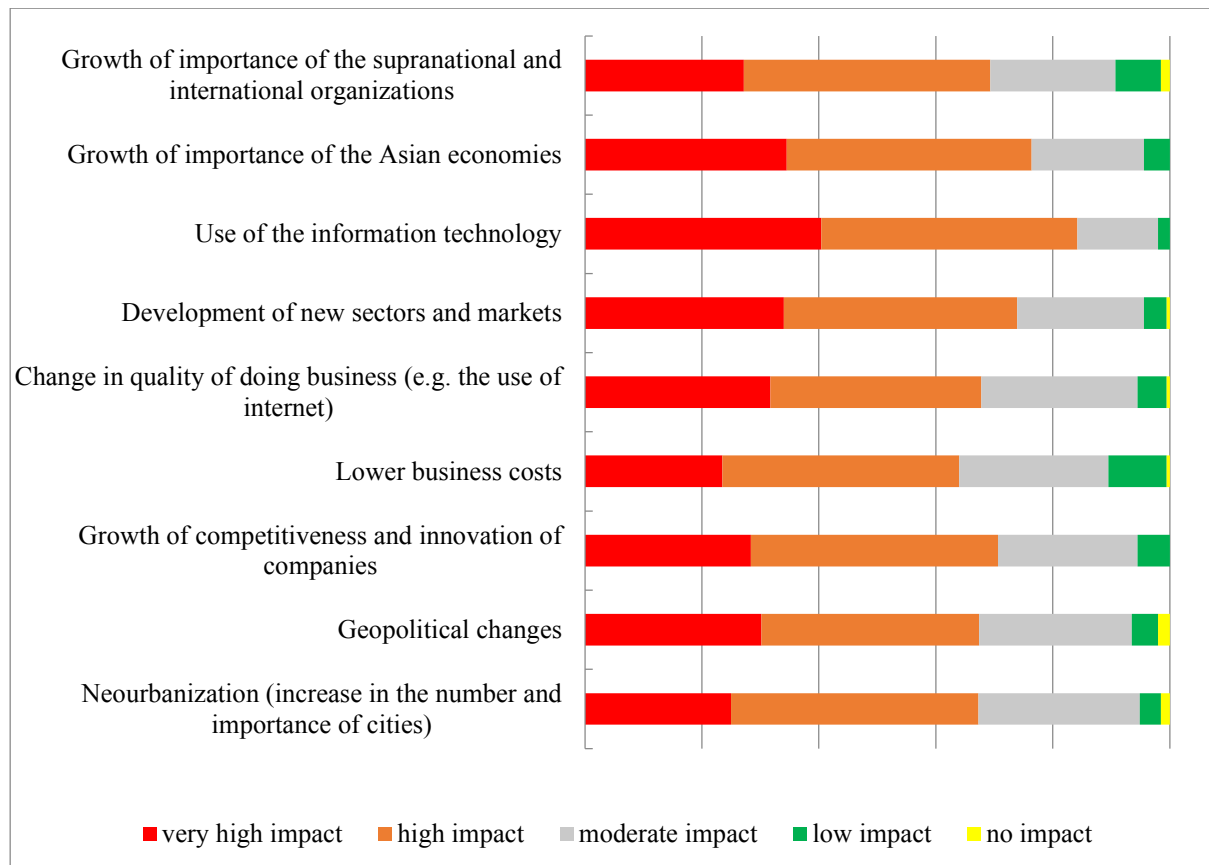
In the next stage of the study, an attempt was made to consider how the decarbonisation policy can affect the course of the individual socio-economic processes and what the nature of this impact will be. 74.9% of the respondents believe that there is a very high or high probability that the energy-intensive industry will move its activities outside the European Union, where decarbonisation has a smaller impact on business activities, and the used financial tools and burdens are not as restrictive. Virtually three-quarters of the respondents (72.5%) believe that as a result of the decarbonisation policy, employment in the industry will decrease. 61% of the respondents are of the opinion that the increase in structural unemployment to a very large or large extent is possible in the selected sectors, most exposed to the negative effects of the decarbonisation process of the economy. The most varied level of the responses was obtained in case of the assumption that the decarbonisation policy would not have any impact on the economy. 36.3% of the respondents agree to this opinion to a large or very large extent, 27.5% agree to a moderate extent, 19.2% believe that the decarbonisation policy will not matter, and 17% have no opinion on this topic. The distribution of answers is shown in Figure 1.



**Figure 1.** Impact of the decarbonisation policy on the Polish economy (N = 207).

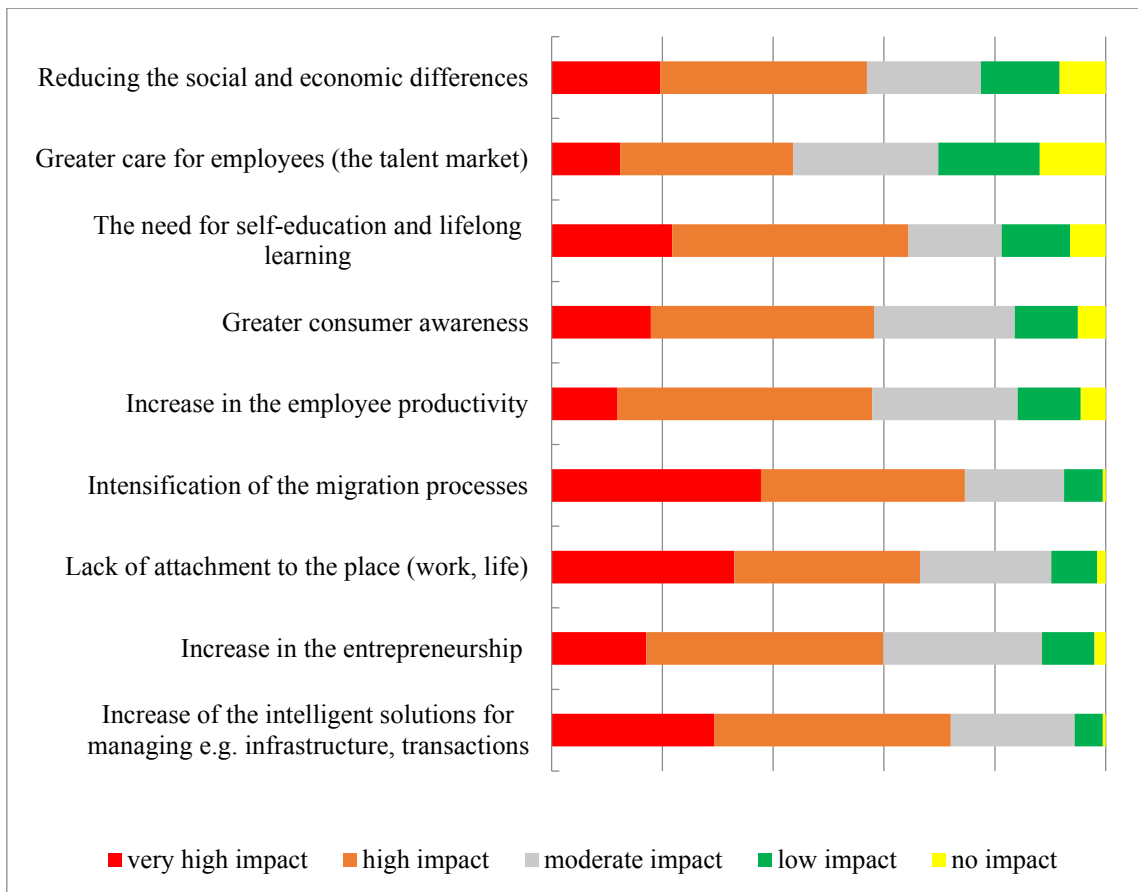
The last part of the survey was the megatrend regarding the respondents' reference to the globalization processes. 59% of the respondents believe that globalization gives development opportunities in global markets, 32% of the respondents said that they pose a threat to the Polish economy, and 9% of the respondents are undecided and express this in the answer "I do not know." The answers that indicate concerns about the globalization process prevail among women because 70% of this group considers globalization as a threat to the Polish economy.

The respondents were also asked to indicate which of the globalization processes and to what extent affect the labour market in Poland. The use of information technology was considered to be the highest impact – 84% of the indications for a very high and high impact range. The second important meaning was attributed to the growing importance of Asian economies and countries – 76.4% of the indications for a very high and high impact range. The third place was taken by the development of new sectors and markets - 73.9% of the indications for a very high and high impact range. A detailed distribution of the answers is shown in Figure 2. Thus, the distribution of answers shows that in almost every case the respondents notice a significant impact of the globalization processes on the labour market in Poland.



**Figure 2.** Impact of the globalization processes on the labour market in Poland (N = 207).

Subsequently, it was necessary to consider the degree of impact of globalization on the specific socio-economic processes that occur in the contemporary world. The processes that are most important from the point of view of changes in the labour market and the need to adapt employees to new requirements and their representatives in social dialogue have been indicated. The highest impact was attributed to globalization in the sense of the intensification of the migration processes – 75% of the indications for a very high and high impact range. The second place, according to the weight of the respondents' indications, is the increase in intelligent management solutions, e.g. infrastructure, transactions. In this case, 72% of the respondents indicated a very high and high impact. Almost 12% of the respondents believe that globalization does not affect greater care for the employee, which means that they do not share the view that changes in the global labour market have a positive impact on the talent market, which is associated with acquiring the adequate employees and proper management of their qualifications. The distribution of answers is shown in Figure 3.



**Figure 3.** Impact of the globalization processes on the socio-economic processes (N = 207).

The summary of the respondents' attitude towards the globalization process can be served by compiling key globalization risks, which are the greatest threat in the next 20 years. As many as 78% of the respondents believe that globalization will contribute to the increase in social inequality, and 75% believe that it will contribute to intensification of the migration processes. This reflects the respondents' fears about the deepening of uneven distribution of goods on the world markets, and thus the uneven distribution of the development potential of the world economies.

#### 4. Conclusions and discussion

The overall percentage of the respondents' answers to all the questions entitles to formulate the basic conclusion that the problem areas undertaken in the research are widely noticeable and known to the participants. Based on the results obtained, it should be stated that automation is recognized as a development opportunity. The indicated regularity is underlined in numerous publications and communications. Marianne Thyssen, the Commissioner for Employment, Social Affairs, Skills and Mobility of Workers, said in 2018 that employment in the EU has reached its highest level in history with 236 million jobs (European Commission,



Employment..., 2018). The regularity described above finds confirmation in the analysis of results of the impact of automation on the increase in unemployment and the creation of new and better-paid jobs. The unemployment rather will not be determined by this process, but by a phenomenon that participates in the socio-economic changes. The obtained answers allow stating that the threat is the possibility of a job loss, as a result of implementing automation, by persons with the lowest qualifications, whose professional duties are uncomplicated and repetitive. The indicated regularity is confirmed, among others, in the Gumtree.pl study developed by the DELab University of Warsaw, in which 54% of the surveyed Poles said that in the future they would have to work in several professions to support themselves. The most afraid are the unskilled workers 70%, the least afraid are the entrepreneurs 43% (Gumtree Polska, 2017). In these conditions, the challenge for politics is to form conditions conducive to creation of highly productive jobs, at the same time ensuring adequate support for those groups of employees who lose due to the polarization processes (Lewandowski, Magda, 2014, p. 196). As a result of the research on artificial intelligence, scientists from the Universities of Oxford and Yale assume that within next 45 years machines will outrun people in all aspects of intelligence, and within further 120 years all work to be done by man will be automated (Money.pl, 2019).

Digitization is also a challenge for a modern human being on the labour market. Changing software and the emergence of newer and newer ICT devices determine the need for skills that will allow users to apply them properly (Batorski, 2012). Based on the results obtained, the need for lifelong learning can be clearly identified in order to adapt society and the economy to the digitization process and to build an information society accessible to all age groups. Digitization is also seen as an opportunity to improve the competitiveness of the economy. It is worth noting the relevance of the activities, indicated by the participants of the research, which, among others, we find in strategic documents for the future development of Europe and the country, such as: "White Paper on the Future of Europe" (European Commission, White..., 2017) and "Time to speed up. Digitization of the Polish economy" (Arak, Bobiński, 2016). The development of the information society, which is a new phase in the development of societies, is a challenge and is an important element in creating the modern economy based on innovation and advanced technologies, in which the intellectual capital is the most important (Głąb, 2016).

The demographic changes are also a big problem as a significant challenge for numerous areas of public policy, such as family, labour market, social security and education. The identified challenges and areas of their impact are the tasks on which the holistic approach to the public policy system should focus. It is the key determinant shaping the human capital, in which, according to the forecasts, by 2050 people over sixty-five years old can constitute 20% (Population structure and aging) of the total population of Europe, in Poland over 36% (GUS, 2014).

Looking for activities in the area of the contemporary social policy and the labour market that can minimize the effects of the demographic changes, based on the results obtained it can be identified the need to include aging in all the policy programs in order to adapt society and the economy to the demographic changes, and to build the society accessible to all the age groups, and to adjust the labour market, services, and social infrastructure to the changes and the demographic forecasts. It is worth noting the relevance of the indicated activities in the context of those already implemented in the European Union and our country. You can find them, among others, in the following documents: “Active aging indicator and its extension to the regional level” (Karpińska, Dysktr, 2015) and “Strategies for action in an aging society” (Rzecznik Praw Obywatelskich, 2012).

Reports from global organizations and the Think Tanks emphasize that the climate challenges of the modern world entail the need for a deep change of the structure of the coal-dependent countries, and in particular the reduction of the importance of hard coal mining, heavy industry and traditional, conventional energy. Studies have confirmed the concerns of a significant part of the Polish society about the potentially adverse impact of the decarbonisation policy, although they are not expressed by as many respondents as would be expected. Such a tendency will have a major impact on structural changes in the labour market, especially in the area of sectors, indicated by the respondents as endangered (mining, energy and metallurgy industries). Other studies also show that by 2050 the number of jobs in mining will fall below 10,000 people and it will be more than seven times lower than today (Bukowski, Śniegocki, Wetmańska, 2018). The results of the study indicate that there is a high risk of decarbonisation for employment in the industry. This confirms the fears that the coal transformation will deeply transform the labour market, especially in the Silesia region. The research from the Institute of Structural Research shows that in the period of 2015-2040 the number of miners will decrease by about 50,000, and the transformation resulting from decarbonisation will be spread over time (Kiewra, Szpor, Witajewski-Baktvilks, 2019).

The interpenetrating trends influence the place of globalization in the process of internationalization and development of the world with new markets, new forms of activity and global corporations. In the respondents' opinion, this process primarily gives development opportunities on the global markets and is seen to a lesser extent as a threat to the Polish economy. Because globalization gives competitive advantages primarily to those who are able to use modern technologies, hence the use of information technology is seen as a stimulator of this megatrend. The growing importance of Asian economies is also a challenge, as confirmed by global analyses that show a change in the balance of power in the world by 2050. The rapidly developing countries will set the tone for the global economy over the next 10 years, and the gap between them and the developed countries will diminish. The Asian countries will be the development leaders, including in particular China and India, which may be the world's largest investors in 20 years' time. The leaders will also include Sub-Saharan Africa, the Middle East, and North Africa (EY, 2016). It is estimated that GDP calculated according to PPP will be in

the G7 countries: USA, Japan, Germany, Great Britain, France, Italy, Canada, at the level of about half of the GDP of the E7 countries: China, India, Brazil, Russia, Indonesia, Mexico, Turkey: (PWC, 2016). The respondents accurately pointed to the growing importance of the migration processes as the base for changes in the socio-economic processes in the contemporary world. In addition to the search for a better place of work and pay, in the contemporary world new categories of employees have emerged, whose lives and professional work are separated from a specific place. The phenomenon of digital nomads, people not related to a specific place of work and residence, working in creative industries such as IT, graphics and marketing, is becoming more and more popular. American Intuit predicts that within 5 years 40% of Americans will work as freelancers, people without permanent employment, EY, 2018). However, the key globalization risk is the increase in social inequalities. This reflects general social concerns about the uneven distribution of goods on the world markets, and thus the deepening disproportions between people, but also the world economies. This is indicated by statistical data showing an almost 16-fold difference in the average hourly rates in the developed countries such as Denmark: EUR 25.52 or Bulgaria: EUR 1.67 (Eurostat, 2019). The reports from humanitarian organizations confirm huge disparities in concentration of the assets around the world. In 2018, the wealth of the world's 26 richest people reached \$1.4 trillion, equivalent to \$3.8 billion of the world's poorest people. At the same time, tax rates for the richest people and the corporations have fallen significantly in the last half-century. In the most developed countries of the world, the average highest tax rate decreased from 62 percent in 1970 to just 38 percent in 2013 (Oxfam, 2019).

The fight for a well-educated employee and the so-called talent market is already becoming the main element of the global market. Currently, 60% of jobs require skills that only 20% of the entire population has (EY, 2016). This leads to an increase in the number of employers looking for employees with the skills necessary to manage complex information, independent thinking, creative, using resources in an effective way, who are also able to communicate effectively with others.

## **Acknowledgments**

The research was carried out as part of the "Competent trade unionist – how to support employees in the labour market change processes" project, co-financed by the European Social Fund under the Operational Program Knowledge Education Development 2014-2020.

## References

1. Arak, P., Bobiński, A. (2016). *Czas na przyspieszenie. Cyfryzacja gospodarki Polski [Time for acceleration. Digitization of the Polish economy]*. Polityka Insight.
1. Babbie, E. (2005). *Badania społeczne w praktyce [The practice of social research]*. Warszawa: PWN.
2. Batorski, D. (2012) *Cyfrowa gospodarka. Kluczowe trendy rewolucji cyfrowej [Digital Economy. Key trends of the digital revolution]*. Warszawa: MGG Conferences.
3. Batorski, D., Olcoń-Kubicka, M. (2016). Conducting research online – principal methodological issues. *Sociological Studies*, 3(182), 99-131.
4. Bukowski, M., Śniegocki, A. (2017). *Megatrendy. Od akceptacji do działań*. Warszawa: WiseEuropa.
5. Bukowski, M., Śniegocki, A., Wetmańska, Z. (2018). *Od restrukturyzacji do trwałego rozwoju. Przypadek Górnego Śląska [From restructuring to sustainable development. The case of Upper Silesia]*. Warszawa: WiseEuropa, WWF Polska.
6. DELab UW (2017) *Aktywni+ przyszłość rynku pracy 2017 [Active+ future of the labor market 2017]*. Report based on a study conducted by the DELab UW ordered by Gumtree Polska as part of the Gumtree.pl Start to Career program.
7. Deloitte (2017). *Beyond the Noise. The Megatrends of Tomorrow's World*. Retrieved from <https://www2.deloitte.com/ro/en/pages/technology-media-and-telecommunications/articles/beyond-the-noise.html>.
8. European Commission (2017). *Employment and social situation in the EU – steady improvement*.
9. European Commission (2017). *White Paper on the Future of Europe*. Available online [https://ec.europa.eu/commission/sites/beta-political/files/white\\_paper\\_on\\_the\\_future\\_of\\_europe\\_en.pdf](https://ec.europa.eu/commission/sites/beta-political/files/white_paper_on_the_future_of_europe_en.pdf).
10. Eurostat (2019). *Population structure and aging*. Available online [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Population\\_structure\\_and\\_ageing/pl](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Population_structure_and_ageing/pl), 04.07.2019.
11. Eurostat (2019). *Wages and the labour costs*. Retrieved from [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Wages\\_and\\_labour\\_costs/pl](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Wages_and_labour_costs/pl).
12. EY (2018). *Era freelancera*. Retrieved from [https://www.ey.com/Publication/vwLUAssets/2018\\_02\\_14\\_Era\\_Freelancera/\\$File/GIG\\_raport\\_13.02\\_DRAFT.PDF](https://www.ey.com/Publication/vwLUAssets/2018_02_14_Era_Freelancera/$File/GIG_raport_13.02_DRAFT.PDF).
13. EY (2018). *The upside of disruption Megatrends shaping 2018 and beyond*. Retrieved from <https://www.megatrends2018.com>.
14. EYQ (2016). *The upside of Disruption. Megatrends shaping 2016 and beyond*. Retrieved from [ey.com/megatrends](http://ey.com/megatrends) and [betterworkingworld.ey.com/disruption](http://betterworkingworld.ey.com/disruption).

15. Głąb, K. (2016). *Kompetencje przyszłości w cyfrowej dysrupcji [Competences of the future in digital disruption]*. Warszawa: Fundacja Naukowa Evidence Institute.
16. GUS (2014). *Prognoza ludności na lata 2014-2050 [Population forecast for 2014-2050]*. Warszawa: Główny Urząd Statystyczny.
17. Karpińska, K., Dykstr, P. (eds.) (2015). *Active aging indicator and its extension to the regional level*. Erasmus University in Rotterdam, European Commission.
18. Kiewra, D., Szpor, A., Witajewski-Baktvilks, J. (2019). *Sprawiedliwa transformacja węgla w regionie śląskim. Implikacje dla rynku pracy [Fair coal transformation in the Silesian region. Implications for the labour market]*. Warszawa: Instytut Badań Strukturalnych.
19. Lewandowski, P., Magda, I. (eds.) (2014). *Praca w dobie przemian strukturalnych [Work in the age of structural changes]*. Warszawa: Centrum Rozwoju Zasobów Ludzkich.
20. Money.pl (2019). *Robots take over people's work. There are more and more of them in Poland*. Available online: <http://finansecodnia.pl/aktualnosci/15100/roboty-przejmujace-prace-ludzi-w-polsce-jest-ich-coraz-wiecej>, 23.06.2019.
2. Naisbitt, J. (1982). *Megatrends. Ten New Directions Transforming Our Lives*. New York: Warner Books.
21. Naisbitt, J., Aburdene, P. (1990). *Megatrends 2000: Ten New Directions for the 1990s*. New York: William & Morrow Company Inc.
22. Oxfam (2019). *Public good or private wealth*. Retrieved from <https://oxfamilibrary.openrepository.com/bitstream/handle/10546/620599/bp-public-good-or-private-wealth-210119-en.pdf>.
23. PWC (2016). *Five Megatrends And Their Implications for Global Defense & Security*. Retrieved from <https://www.pwc.com/gx/en/government-public-services/assets/five-megatrends-implications.pdf>.
24. Rzecznik Praw Obywatelskich [Ombudsman] (2012). *Strategie działania w starzejącym się społeczeństwie [Strategies for action in an aging society]*. Warszawa: Rzecznik Praw Obywatelskich.