



Republic of Bulgaria
ECONOMIC
AND SOCIAL COUNCIL

OPINION

on:

CHALLENGES FACING LABOUR

IN THE CONTEXT OF THE DIGITIZATION OF THE ECONOMY

(own-initiative opinion)

Sofia, 2019

The Economic and Social Council (ESC) has included in its Action Plan the elaboration of an opinion on "Challenges Facing Labour in the Context of Digitization of the Economy". The opinion had been distributed to the Standing Commission on Labour, Income, Living Standards and Industrial Relations and the Commission on Social Policy. Plamen Dimitrov, ESC Member of Group 2 - Trade Unions, Chairman of the Commission on Labour, Income, Living and Industrial Relations of ESC, was appointed rapporteur for the opinion. At its plenary session, held on 18 October 2019, ESC discussed and adopted this opinion.

ABBREVIATIONS USED

ESC	Economic and Social Council
EU	European Union
R&D	Research and development
ILO	International Labour Organization
EESC	European Economic and Social Committee
NSI	National Statistical Institute
WEF	World Economic Forum
AI	Artificial Intelligence
OECD	Organization for Economic Co-operation and Development
EC	European Commission
LC	Labour Code
ICT	Information and Communication Technologies
EP	European Parliament
WB	World Bank
CEE	Central and Eastern Europe
ME	Ministry of Economy
GDP	Gross domestic product
GDPR	General Data Protection Regulation
DESI	Digital economy and society index

1. CONCLUSIONS AND RECOMMENDATIONS

1.1. According to ESC, the challenges facing labour in the context of the digitization of many activities are a multifaceted problem that requires interdisciplinary study. The warnings of many economists so far are real and can come true, though not to the extent initially expected. The future of labour will depend mainly on the political decisions that countries will make.

1.2. ESC has repeatedly underlined in its opinions¹ and resolutions² the importance of this problem. In this context, ESC believes that through the right policies, technological development opportunities will be used appropriately and the risks will be minimized.

1.3. According to ESC, the increasing share of temporary workers internationally may become one of the reasons why the wage gap and productivity in individual Member States change dynamically depending on their level of development - globalization, integration and technology. This will create new inequalities and slow down real convergence processes across the European Union.

1.4. ESC recalls that the degree of technological advancement also determines the productivity of each worker. Wages are the result of a number of factors, but Bulgarian workers are definitely losing competitiveness due to the lack of adequate policies and effective solutions to technological transformation issues.

1.5. According to ESC, labour market institutions need to be flexible but also provide the necessary security to achieve a fair distribution of opportunities and risks in terms of access to the labour market and quality of employment.

1.6. ESC recommends a gradual and sustainable orientation towards the creation of high-paying jobs that generate high added value, which will lead to corresponding positive changes in the professional structure of the economically active population in our country.

1.7. According to ESC, in the context of technological transformation, the shifting of economic layers and the change in the structure of individual EU labour markets (each with its own peculiarities) have the potential to shorten the business cycle. As a result, preconditions for increasing imbalances in labour supply and demand are created.

¹ ESC Opinion on "Policy Opportunities for Young People in Bulgaria".

² ESC Resolution "Challenges Facing Bulgarian Citizens Due to the Risks of the Global Digital Environment".

1.8. ESC notes that the link between labour productivity and wages is about to be lost³. Currently, there are a number of cases and periods of asymmetric indication, but in the long run, the statistical relationship between the two variables will weaken even further, i.e. labour productivity will play an ever smaller role in determining wages. This foreshadows a new world of work in which the workforce will work in a changed environment and earn its income in increasing reliance on many other factors (e.g. degree of technological progress, investment in R&D, interaction with artificial intelligence, etc.).

1.9. ESC believes that significant changes to the rules are needed to establish transparent and democratic conditions for interaction between people and digital technologies. There will undoubtedly be pieces of EU law that will need to be revised (e.g. labour legislation regarding non-standard forms of employment, social security, taxation, etc.).

1.10. At the same time, ESC stresses that an ageing population and an increase in the age dependency ratio will not only lead to significant pressure on the working-age population, but are also likely to increase pressure on public finances. This means that current security and fiscal models need to be adapted to the changing conditions in a timely manner.

1.11. According to current research⁴, 82% of people believe that the state needs to regulate more non-standard forms of employment and to provide more transparency and clarity in the conditions of rapid technological advance. Therefore, ESC recommends that active work should be done in this direction including at national level.

1.12. In this regard, ESC believes that the process of drawing up Bulgaria's strategy for the transition to Industry 4.0 should be accelerated, as no progress has been made so far in this direction. Only a concept was adopted in 2017, which also for some time now has been in need of update, because it lacks sufficient analysis of the effects on the labour market⁵.

³ https://ras.nacid.bg/api/reg/FilesStorage?key=e14c321a-e56c-40d6-8a7f-b23b498e3559&mimeType=application/pdf&fileName=%D0%94%D0%B8%D1%81%D0%B5%D1%80%D1%82%D0%B0%D1%86%D0%B8%D1%8F_%D0%9B%D1%8E%D0%B1%D0%BE%D1%81%D0%BB%D0%B0%D0%B2_%D0%9A%D0%BE%D1%81%D1%82%D0%BE%D0%B2.pdf&dbId=1

⁴ ILO. (2017).

⁵ ESC Opinion on "The Future of Labour: The Challenges of the Fourth Industrial Revolution".

1.13. ESC believes that action should be taken to expand the labour market statistics database and the variables that affect it in the digital economy. In order to devise an adequate transition strategy, sufficiently reliable statistical information is needed for the purposes of the various surveys that stakeholders would like to carry out. This will make it easier to take a well-reasoned and adequate position on many issues that have not yet been answered firmly⁶.

1.14. In addition, the Bulgarian government needs to focus more on measures to stimulate digital competence and digital culture from an early age. The establishment of a special body/institution in Bulgaria⁷ to monitor the quantitative and qualitative change in the professions could be considered as part of these measures. The idea is for this body/institution to collect and process statistical information to support the policy-making process. This will make it easier for the state and the business to offer adequate knowledge and skills to the younger generations. ESC believes that the contribution from the activities of such a body/institution to both primary and secondary education and to higher education will be significant.

1.15. In this regard, ESC recommends the establishment of an information system to record the needs of businesses for professionals at the local level and to analyze and synchronize this information with education, incl. also with regard to the development of admission plans in vocational and higher education institutions.

1.16. Due to the accelerated development of technology and the need for continuous re-training of the workforce, the process of "lifelong learning" must continue to evolve and improve. Currently, policies and measures are focused primarily on poor, marginalized groups, but they will increasingly need to be targeted at people over 50, people with high qualifications but in professional areas with dying functions, and especially people with relatively lower qualifications (so-called. "contingent of middle-skilled workers").

1.17. According to ESC, the state and the social partners should offer and develop alternative forms of training (digital platforms, mobile applications, online courses, etc.). This is a major advantage of new technologies and if the quality of the service offered is developed, the non-monetary effect on the qualifications of the working-age population will be significant.

⁶ EESC opinion, INT / 877 Coordinated Artificial Intelligence Plan

⁷ This body need not be new, the idea may be adapted to an existing administration or unit (e.g. to the NSI, NAVET or others).

1.18. ESC believes that more public funding is needed for R&D investment because our country is one of the last in the EU in this indicator⁸. Moreover, the lack of such investments creates additional difficulties in the whole process of transition of labour to digitization of the economy.

1.19. ESC restates its recommendation on the creation of an Alliance for the Future of Work and Society, in line with one of seven initiatives to celebrate the 100th anniversary of the ILO this year⁹. This alliance should include representatives of the state, social partners, academia and civil society, the main idea being that everyone should contribute to outlining the parameters of changes in the labour market in Bulgaria following the advent of digital technologies.

1.20. ESC notes with concern that the growth of income inequalities is deepening both globally and nationally. In this sense, ESC recommends the use of adequate minimum social standards and a more active use of fiscal policy as a tool to combat this unfavourable trend.

2. DIGITIZATION OF THE ECONOMY AND THE RESULTING CHALLENGES FACING LABOUR

2.1. The processes of digital transformation are part of the so-called Fourth Industrial Revolution¹⁰. A characteristic feature of this phenomenon is that many technologies are replaced by others in a very short period of time and they lead to significant changes in all spheres of public life, including the labour market.

2.2. ESC recalls that the term Fourth Industrial Revolution refers to technologies that combine hardware, software and biotechnology. This revolution is marked by innovative breakthroughs in areas such as robotics, artificial intelligence, nanotechnology, quantum computers, biotechnology, the Internet of Things, wireless technology (5G), 3D printing and fully autonomous vehicles. In this sense, there is already considerable evidence that the term digitization belongs to a much larger-scale restructuring of all elements of public life.

⁸ Eurostat, 2019. <https://ec.europa.eu/eurostat/documents/2995521/9483597/9-10012019-AP-EN.pdf/856ce1d3-b8a8-4fa6-bf00-a8ded6dd1cc1>

⁹ ESC Opinion on "The Future of Labour: The Challenges of the Fourth Industrial Revolution". ESC, 2018

¹⁰ The phrase "The Fourth Industrial Revolution" was first introduced by Klaus Schwab, chairman of the CIF, in a 2015 article in Foreign Affairs.

2.3. Recent surveys¹¹ report that 40% of the jobs created between 2005 and 2016 are in sectors where digital technologies are predominantly used. This is a positive sign with regard to the prevention of technological unemployment ahead, but this process is developing extremely unevenly.

2.4. Despite the enormous opportunities offered by the processes of digitization and automation in the economy, there are a number of concerns that fundamentally affect the future of work in the context of the technological revolution and beyond.

2.5. The process of introducing new technologies creates the preconditions for predictability and better maintenance of the machines used for manufacturing in particular industries. Thanks to sensors, machines can now transmit warning signals long before accidents or malfunctions occur, which reduces the risk of accidents at work and facilitates the work process.

2.6. Business innovation driven by digital transformation is revolutionizing the industry and leading to huge savings in the most valuable corporate resources - time and money. But as with any revolution, there will be clear winners and losers. Companies that are unable to keep up with digital transformation run the risk of being left behind. The same applies to workers and their digital competences.

2.7. An important point in technological development is the introduction of artificial intelligence technologies. More broadly, studies predict that AI can contribute 12.8 trillion Euros to the global economy by 2030, representing a 14% increase on global GDP for 2018¹². At the same time, it is estimated that AI can increase overall productivity by up to 40% by 2035. There is a process in which more people and devices connect to the Internet while AI is expanding exponentially. This increases our ability to promote higher productivity growth, better services and improved human well-being.

2.8. ESC finds that the traditional division of the economy into agriculture, industry and services is gradually being replaced by the perception that services are an integral part of the production process and as such they cannot be separated from it. At the same time, there are processes of mass reduction of employment in the agriculture sector at the global level.

¹¹ OECD (2019). Global Employment Outlook.

¹² OECD. (2019). The Future of Work: Global Employment Outlook 2019.

2.9. Over the next decade, new technologies will replace low-skilled labour, while at the same time playing a complementary role to high-skilled labour. In this regard, ESC notes with concern that they will be the biggest problem for people with low skills, but also the most important helper for people with high skills, improving their skills and streamlining their workflow.

2.10. According to estimates from international organizations and various experts by 2045 machines will be able to do much of the work that people currently do. ESC believes that new technologies are pushing the global economy towards permanent technological unemployment and increasing the need to introduce alternative forms of remuneration because people are gradually losing their competitive advantages in the labour markets.

2.11. ESC notes with concern that the risk of automation is real, although its scale varies from country to country according to the degree of technological progress they have achieved. Various studies¹³ report that 14% of jobs are currently at high risk of automation, while another 32% will be radically transformed over the next 15 years. At the same time, many employees no longer have the necessary competencies to perform the new tasks arising from digitization (6 out of 10 workers lack basic computer skills or have absolutely no computer skills¹⁴).

2.12. At the same time, ESC draws attention to the fact that digital work platforms are growing, leading to new forms of work organization and the distribution of workforce tasks. Questions are raised about the functioning, benefits and negatives arising from the reorganization of the work that these platforms entail and the risks involved.

2.13. ESC emphasizes that, in addition to these processes, the population globally is ageing faster. In 1980 the share of the population aged 65+ was 20% of total population, in 2015 - 28%, and in 2050 this share is expected to reach 53%¹⁵.

2.14. According to ESC, the main challenges will be technological unemployment, precarious employment, non-standard forms of employment, low or no opportunity to negotiate key elements of the labour process, digital incompetence, and the ageing of the general European population.

¹³ OECD. (2019). Global Employment Outlook.

¹⁴ OECD. (2019). Global Employment Outlook.

¹⁵ OECD. (2019). The Future of Work: Global Employment Outlook 2019.

2.15. In this regard, ESC considers that the possible main consequences for labour from the advent of non-standard forms of employment as a result of technological progress can be synthesized as follows:

2.15.1. Loss and transformation of jobs that require low and medium skill levels, and the creation of others that require higher levels of competence.

2.15.2. Erosion of labour standards due to lack of a definitive apparatus and direct commitments by governments.

2.15.3. Creating digital governance and risk of loss of trust between executives and employees.

2.15.4. Expanding inequalities of all kinds.

2.15.5. Increasing the gap between the skills available in business and higher education.

2.16. According to ESC, regulating new technologies is a challenge that involves tackling problems such as uncertainty and rapidly evolving technological processes. At the same time, very often institutions are not able to respond quickly enough to new digital and technological changes.

2.17. If we draw a parallel with different historical stages of development in different regions and countries, it will be seen that the trend has always been the same - the disappearance of the middle class and formation of two classes of low-skilled and high-skilled workers. According to ESC, the current situation is no different in terms of the difficulties that the European labour market and each country, including Bulgaria, will face.

3. GOOD PRACTICES IN EU MEMBER STATES

3.1. The digital transition policy also predetermines the future economic development of each Member State. It is in this context that national digital transition strategies, adopted by all Member States except Bulgaria, are important.

3.2. ESC notes that significant progress has been made at EU level on the topic of digitization and the challenges it brings to labour. In this context, in May 2016 the European Commission evaluated the online platforms in its Communication focusing on both innovation opportunities and regulatory challenges. In June 2016

The Commission also adopted its European Economic Cooperation Programme, which clarified the concept and provided some guidance on the employment status of platform workers and the EU definition of workers.

3.3. The European Pillar of Social Rights also aims to address some of the political challenges posed by new forms of employment, including platform work. In December 2017 the Commission presented another accompanying initiative - a proposal for a new directive on transparent and predictable working conditions, and in March 2018 - a proposal for a Council recommendation on access to social protection for workers and self-employed persons.

3.4. ESC recalls that specific measures and actions have been taken in a number of European economies to facilitate the economy's transition to technological innovation, including also digitalization.

3.4.1. On 7 October 2016 the French Digital Republic Act was adopted. For data privacy professionals this law is important as it introduces several major changes under the French Data Protection Act of 1978 and under other laws before the GDPR¹⁶ entered into force in 2018. The Digital Republic Act provides for the introduction of numerous rules for the protection of personal data in a digital economy.

3.4.2. Changes in employment status were discussed by the Austrian Ministry of Labour, Social Affairs and Consumer Protection - processes for recruiting workers through online platforms are monitored, as well as the so-called "crowd work"¹⁷.

3.4.3. From 1 January 2018 the Czech Republic made changes to its Labour Code. Part of these changes concern teleworking. Under the new provisions, the regular use of home office should be agreed in the employment contract and the employer should cover the costs related to the home office - internet connection, telephone and energy. However, a few overtime weekends and overnight allowances are not applied.

3.4.4. In Hungary, European Structural Funds provide funding for the supply of ICT equipment to schools. In the country, Vodafone (with the Digital School Programme) and Telenor (with the Hyperschool Programme) entered schools to promote the digital culture and developed effective teaching methods.

¹⁶ General Data Protection Regulation (GDPR)

¹⁷ This is employment that seeks to outsource tasks to a large pool of online workers, with connection to the worker and task accomplishment mostly done online through digital technology.

3.4.5. In 2015 The Slovak Ministry of Economy published a Smart Industry for Slovakia Strategy aimed at adapting the national economy to digital trends and modernizing industries, business models and society to remain a competitive and profitable economy.

3.4.6. An e-Council has been set up in Estonia to guide the development of the digital society, e-governance and the implementation of the Digital Agenda 2020, which aims to increase the technological competitiveness of the Estonian economy.

3.5. ESC notes that dialogue with social partners and other stakeholders on the future of work is ongoing in a number of other EU countries: the Work 4.0 Dialogue in Germany (and the published White Paper on Labour 4.0); a specially designed committee in Norway examines the positives and negatives of the so-called "sharing economy"; Austria's Industry 4.0 platform, which brings together social partners, also has similar functions. In addition, national digital security and technological transformation strategies are being developed in all EU Member States.

3.6. ESC welcomes that international partnership on cross-border digital security is particularly encouraged at EU level (good practice in this area is the Directive (EU) 2016/1148 of the European Parliament and of the Council of 6 July 2016 on measures for a high general level of security of networks and information systems in the Union).

3.7. ESC notes that, at this stage, all Member States have focused their efforts on issues related to industrial relations in the context of the digital transformation of the economy. It is noteworthy that some countries have also focused their efforts on promoting digital competence from an early age. This good practice could potentially be perceived in Bulgaria as well, since our country ranks last in the EU in these indicators.

4. EXPECTED CHALLENGES FACING BULGARIA AND POSSIBLE SOLUTIONS

4.1. ESC notes with concern that the link between nation ageing and productivity in Bulgaria follows the inverted-U model. The peak in productivity is between the ages of 30 and 50. The average age of the population of Bulgaria in 1960 was 30.3

years, and as of 2019 it is 43.1 years¹⁸. This shows that the nation is ageing and the working age population is declining, which in turn reduces the likelihood that labour productivity will increase without investment in new technologies. At the same time, this challenge is a projection of global trends in population ageing.

4.2. ESC also recognizes that although job growth is underway, many of them create low added value and therefore generate very low payment rates. In this sense all attempts through a specific economic stimulus policy to integrate unemployed people into the labour market and integrate them, reducing the share of long-term unemployment, etc. can be considered ineffective in terms of workforce development.

4.3. ESC recalls that Bulgaria is ranked 58th out of 115 countries in the 2018 annual ranking for business digitalization¹⁹, using 5 evaluation criteria - regulation, knowledge, connectivity, infrastructure and scale. With the maximum score on all categories of 100 points, Bulgaria scores 40 points, while the leaders in the ranking USA, Germany and the Netherlands score 87, 75,3 and 74,3 points respectively. The countries in the region, such as Greece, Turkey, Romania, Serbia and Croatia, ranked ahead of our country.

4.4. At the same time, there is another trend - more than 80% of people born after 1990 are active on social media and consciously use the internet and digital devices²⁰. In this regard, ESC believes that there are prerequisites for increasing digital inequalities between generations, which is a threat to jobs, employment and, in general, to the economic order we know so far.

4.5. It is well known that the countries that can afford new technologies sooner will, in practice, have lower labour costs and higher productivity. The most unprepared will have great difficulty in terms of both competitiveness and ability to respond to challenges and manage processes. In this respect Bulgaria lags far behind and there are no significant competitive advantages at this stage.

4.6. ESC regretfully reports the finding of most studies that the most affected countries will be the southern periphery of the EU, the CEE, and especially

¹⁸ World Bank (2015). Productivity in Bulgaria: Lessons from the past, opportunities for the future. WB document: <https://www.worldbank.org/content/dam/Worldbank/document/eca/Bulgaria/Bulgaria-Productivity-6-26-15-bg-web.pdf>

¹⁹ The ranking is compiled by Euler Hermes Commercial Credit Insurance Company.

²⁰ Global Digital Compass, 2018.

Romania and Bulgaria. The provision of continuing ICT training in Bulgaria is between 2 and 3 times less than the EU-28 average, depending on the size of the company²¹. This is the case because Bulgarian workers use the new technologies at their workplace to a much lesser extent.

4.7. ESC also notes that according to the DESI index²², which measures the level of introduction of new technologies in the production process, Bulgaria is ranked last among the 28 Member States. DESI for Bulgaria is 36.3 (compared to the EU average of 52.45). Our country is in the 'falling behind cluster' group of countries that are below the EU average and whose results are slower than those of the EU as a whole. At the same time, Bulgaria is lagging behind the average European levels in all 5 components of the index, but the difference in 3 of them is especially worrying:

- human capital - 7.13 for Bulgaria compared to 12.0 for EU-28;
- Internet usage - 4.88 and 8.01 respectively
- integration of digital technologies - 3.63 and 8.21 respectively.

4.8. According to ESC, there will be a great differentiation in the labour market between the skilled and unskilled labour in the long term. In addition, low-skilled workers will find themselves technologically unemployed because they cannot adapt to the new environment or have worked in industries that are becoming obsolete or uncompetitive, or lack prospects.

4.9. In view of the challenges facing the Bulgarian labour market, ESC believes that it is imperative to pursue targeted and urgent policies directed to the education systems and on-the-job training, because the gap between the qualities of the workforce that are in demand and those supplied is increasing. Some of these policies could be targeted at increasing investment in skills, promoting lifelong learning, with a focus on improving digital skills and ICT, etc. In its acts²³, ESC has repeatedly made recommendations in this direction, which once again underlines the importance of the problem and the need for full consensus on it.

²¹ Eurostat. (2019). DESI – Digital Economy and Society Index Data.
<https://ec.europa.eu/digital-single-market/en/desi>

²² Digital Economy and Society Index, 2019.

²³ ESC Opinion on "Policy Opportunities for Young People in Bulgaria"; ESC Opinion on "The Future of Labour: The Challenges of the Fourth Industrial Revolution".

4.10. ESC emphasizes that the general tendency for Bulgaria is characterized by some professions becoming obsolete and their gradual decline, but at the same time also with the emergence of new professions. However, there is no body/institution in Bulgaria to monitor the quantity and qualitative changes in the professions. ESC therefore recommends that such a body/institution be created to collect and process statistical information to support the policy-making process.

4.11. ESC believes that it is imperative to come up with a strategy for the transition to the digital economy and to include in it a section that focuses entirely on the labour market and the future of the workforce, because in the 2017 concept prepared by the Ministry of Economy this part, as estimated by ESC, was very briefly considered²⁴.

4.12. According to ESC, it is also necessary to develop a new legislative framework, where necessary, and to update the existing one in order to avoid legal cases and facilitate the interpretation of emerging new forms of employment and employer-employee relations in the context of digitization. Moreover, Bulgaria can benefit from the European experience gained from other Member States and take concrete steps in this direction that would assist the Bulgarian labour market in the transition to the digital economy, for example: the creation of a Digital Economy Act; amendments to the Labour Code, etc.

4.13. ESC believes that, alongside the creation of a specific body/institution to collect and process statistical information on policy-making, it is imperative and broad involvement of NGO representatives throughout the debate. In this sense, it is necessary to involve representatives of the social partners, representatives of the scientific community and civil society. They should support the work of the Ministry of Economy in drawing up the common strategy²⁵.

4.14. Last but not least, ESC recommends that the Bulgarian government increase public investment in R&D as a percentage of GDP, since Bulgaria remains one of the last places (only 0.75% of GDP at the average level of 2.07% of GDP in 2019)

²⁴ Concept for digital transformation of the Bulgarian industry (Industry 4.0). Ministry of Economy - 2017 (<https://www.mi.government.bg/bg/themes/koncepciya-za-cifrova-transformaciya-na-balgarskata-industriya-industriya-4-0-1862-468.html>)

²⁵ Ibid.

by this indicator in the EU²⁶. This increase must be achieved with additional funds from the State budget and through the European Structural Funds.

/signed/

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²⁶ Eurostat.(2019). First estimates of Research&Development expenditure of GDP.
<https://ec.europa.eu/eurostat/documents/2995521/9483597/9-10012019-AP-EN.pdf/856ce1d3-b8a8-4fa6-bf00-a8ded6dd1cc1>