

Bulgarian National Report

1. Main dimensions of direct participation and its impact in the system of industrial relations in the partner countries (based on previous research)

Direct employee participation in the management of enterprises is not strongly represented in Bulgaria and for this reason it is the subject of quite a few studies. In the period after 1990, the subject of direct employee participation in management is rarely met in research works, including in managerial and research approaches and research in the field of industrial and labour relations. Direct participation is often commented on and understood as representative participation, but the research perspective to focus on the individual aspects of direct participation is lacking. The reasons are the lack of a representative selection of examples and good practices, as well as lack of scientific interest in this matter, specifically in relation to representative participation, industrial democracy and industrial relations.

In general, the main forms of direct employee participation in the management process in Bulgaria include:

- a) consultative forms – surveys of workers' opinions; workplace meetings; systems for collecting employee suggestions and ideas for innovation;
- b) delegation of functions – they include participation in quality control; delegation of individual or group autonomy in the workplace; project teams.

The main issues discussed with workers through direct participation are related to the production process, technology, quality, productivity, working hours, health and safety at work and environmental policy. In

some cases, social issues and topics related to reconciling work and private life are also discussed.

The issue of direct employee participation in management is referred to in the Third European Company Survey¹ of the European Foundation for the Improvement of Working and Living Conditions in 2013, which covers Bulgarian enterprises as well. According to the data, 53% of the surveyed enterprises in Bulgaria have in place good systems and mechanisms for exchanging information between managers and workers and good communications guaranteeing the inclusion and support of the workers. In 25% there is insufficient effort and few changes to improve the internal information exchange and communications, but some involvement by workers still exists. And in 18% of the enterprises the systems for information exchange and communication are at an average level, but there is no support and involvement of workers. According to data from the same survey, in 50% of the surveyed small enterprises workers are included (in one way or another) in the elaboration and adoption of management decisions and in 17% of the cases they are consulted. Interestingly, in the medium-sized enterprises the relative share of the cases of direct workers' participation in decision making is 37%, whereas for the big enterprises the relative share of participation in the decisions decreases to 31%. This is probably due to the fact that in small and somewhat in medium-sized enterprises the opportunities to apply the legally established form of general meetings, as well as the use of other mechanisms of direct employee participation are better, whereas in large companies the big staff number does not provide enough opportunities for direct communications.²

¹ See EUROFOUND. 3-rd European Company Survey. Direct and indirect employee participation. A. Akkerman. R. Sluiten , G. Jansen. Luxemburg. 2015

² See EUROFOUND, 3-rd European Company Survey. Direct and indirect employee participation. A. Akkerman. R. Sluiten, G. Jansen. Luxemburg. 2015.

According to the data of the new European Company Survey 2019³, there is regular direct employee participation, with high influence, in 1/3 of the establishments in Bulgaria, while in 31 % of establishments there is irregular direct employee' participation, with limited influence.

Another source is the survey, provided under the project DIRECT (2016-2018)⁴ According to the results of these surveys among the representatives of the sectoral trade union federations, direct participation in the management of enterprises is useful for achieving higher productivity, introducing new technological solutions or improving the old ones, for stimulating initiative, and hence for achieving higher competitiveness and sustainable business development.

Direct participation in all the selected companies involves various types and forms and usually broad number of issues is covered. There is no principal difference in the models of direct participation, based on the form of property (private or public) and on the sector (manufacturing or services).

Direct participation is better used in companies, where particular work organisation (lean production) is implemented. There is not visible resistance concerning such work organisation in the selected company, in general trade union representatives share some fears with regard to the consequences from the new work organisation models. In particular their fears are related to the work intensity, working time, health and safety at work. It seems that the workers' interests require models of work organisation and direct participation, which could ensure both

³ See EUROFOUND. CEDEFOP. European Company Survey 2019. Luxemburg.2019

⁴ See Direct employee participation in Bulgaria. Country report. DIRECT –VS/2016/0305. 2018. Authors. E. Ribarova. I Atanasova. M. Mincheva, D. Brankov

productivity and quality, on one hand and acceptable working conditions, on the other.⁵

In some companies, the direct participation is existed together with new work organisation and flexibilisation of work. Both internal and external flexibility are used. However, the influence of the workers/trade unions on flexibility is comparatively low or completely absent. A limited number of work organisation issues are discussed in consultation with the workers. Workers/employees do not have freedom of choice concerning the working time and work organisation, with the exception of particular decisions on job rotation, absence and so on.⁶

Most respondents in some surveys share the opinion that the essential conditions for implementing direct participation in enterprises are the existence of a good working climate, organisational culture, trust between employers and workers and their representatives (including trade unions), the development of social dialogue and the goodwill of the partners. Research results demonstrate a certain correlation between the quality of industrial relations and the use of forms of direct participation. Moreover, contrary to the hypothesis that direct participation would lead to neglect of trade unions, such practice and results are not confirmed.⁷

The interviews, which are collected during the implementation of project DIRECT (2016-2018) indicate that most of the employers and some of the trade union representatives share the views that direct participation and the other forms of industrial democracy are interrelated and could support each other. Most of the respondents agree that conflicts among the various forms of industrial democracy do not usually appear, with

⁵ The same

⁶ See Going up the high road. Rethinking the role of social dialogue to link the welfare to competitiveness. VS/2013/0349. Bulgarian national report. 2014. Authors E. Ribarova, N. Daskalova

⁷ See Direct employee participation in Bulgaria. Country report. DIRECT –VS/2016/0305. 2018. Authors. E. Ribarova. I. Atanasova. M. Mincheva, D. Brankov

some exceptions – in cases where the interests of some working teams or groups of workers are confronted with the interests of most of the other workers: cases of shift work, health and safety at work, payment etc. (Representatives of the sectoral federation of workers of most of the branches in the food industry). All these companies have implemented innovations in work organisation, but they are focused on company goals and improvement of the productivity and competitiveness, rather than on the workers'/employees' needs.⁸

Direct participation and workers' representation at company level

According to most of the research data there are no indication, that there is a sufficiently stable link between direct participation and I&C processes, as well as between the working conditions committees, although the aspects of working conditions and health and safety at work are among the most frequent topics of individual and group consultations. There have been consultations with the trade unions and there are even negotiations with them on the mechanisms for implementing direct participation, but they are not sufficiently informed about all the features and results of its implementation. Indicative evidence suggests that some union representatives and some managers underestimate the importance of direct participation and its impact on enterprise management, work performance and the quality of working life.

Trade unions and employers' views concerning direct participation

Representatives of trade unions and employers view industrial democracy more generally - as activities for information, consultation and, to some extent, participation in governance (decision-making), because there is

⁸ The same

no clear regulatory framework for the latter in Bulgaria. Some of them point out that the feedback from the information and consultation representatives provided by the employees is perceived essentially as a form of direct participation.

Some **trade union representatives**, both at national and sectoral level think that direct participation could improve the industrial democracy (including the collective bargaining) and the industrial relations in general as well as the motivation for work and productivity. Both, employers' and trade union representatives think that direct participation is rather a managerial approach, which mainly addresses the improvements of the productivity and corporate development.

In many cases, the views of employer and trade union representatives on direct participation seem similar. This conclusion follows from the practical forms applied in certain studied sectors and their importance - they are aimed at improving the production process, labour organization, productivity and sometimes at health and safety at work, and much less often refer to sensitive issues such as wages, social benefits, etc.

Direct participation and workers' and employers' interests- main results

Most research and development on this issue focuses only on the structural approach and describes management functions and roles. According to the latest research on the performance of business structures in their specific work environment, one of the main determinants of success is the continuous increase of the workforce motivation and in particular the direct participation of employees (in various forms) in the process of enterprise activities management or the business structure that participates in the socioeconomic relations. In this regard, the goal of continuously increasing the degree of employee participation in decision-making at management level is of particular

importance, thus complementing the management process, led and meaningfully executed by the management staff. Employee participation is generally guided by managers, based on existing corporate culture and established procedures, but very often this is not enough. Due to this, laws and regulations that form legal standards for the improvement of this process are being created. These legal standards have a predominantly indirect effect in the European Union, as they generally oblige employers to take actions related to employee participation through their representatives (trade unions, works councils).

Employee participation includes both motivational and direct participation activities, as they enable employees to exercise democratic influence over the company's business decisions. This is the most important factor in direct and indirect participation.

The EU's approach to company law and corporate governance is characterised as minimalistic, based on minimal regulatory intervention and a focus on the principle of mutual recognition. EU action is limited to removing barriers to cross-border business, not to promoting a European model of corporate governance, so in reality this is an approach of extreme deregulation. Employee participation in decision-making at the workplace is treated as a potential burden on businesses, not as an asset or a right to equality. The consequences of this approach are deterioration in employee's participation rights and inconsistency in the application of the *acquis*. Managements of enterprises feel free to interpret European law selectively in order to minimize their obligations under national law. They can also organize their corporate structure in order to choose less "inconvenient" national laws, such as companies called "mailboxes" - companies with an address registration in a country with a favourable tax regime (just with a mailing address), which carry on business in other countries in order to minimize their tax liabilities.

However, in different environments in the EU, incl. the European Trade Union Confederation, academic representatives and, in part, some of the employers' organisations agree to work on the model of "good corporate governance", which includes various aspects of employee participation in management, including within multinational companies, and in the process of cross-border mergers and acquisitions. The aspects of information and consultation, as well as worker representation in the supervision and management bodies of the enterprises are placed in the first place. Direct participation, although left in the background, is steadily making its way both in the practices (especially in MNCs) and in the discussions between trade unions, academics and sometimes representatives of managers and employers.

Direct participation is broader in companies, where better industrial relations exist. The link between the forms of direct participation and the forms of workers representation are still not visible enough. Trade unions in all the companies are in favour of direct participation and in two of the companies they are even involved in the negotiations for its implementation, but the trade union involvement in the implementation of the direct participation practices could be still improved. Trade unions need more information concerning the forms and results of the direct participation and its impact on the quality of working life and workers' rights. The same concerns the relations between the other forms of workers' participation and representation.⁹

2. The implementation of new technologies: automation, digitisation, usage of ICT and their impact on work organisation, working conditions and direct participation - national dimensions in the partner countries

⁹ See Direct employee participation in Bulgaria. Country report. DIRECT –VS/2016/0305. 2018. Authors. E. Ribarova, I Atanasova, M. Mincheva, D. Brankov; See Going up the high road. Rethinking the role of social dialogue to link the welfare to competitiveness. VS/2013/0349. Bulgarian national report. 2014. Authors E. Ribarova, N. Daskalova

Main features of implemented new technical and technological changes

Digitalisation has also accelerated over the past 10 years. While the use of technology such as computers and email is a more established feature of the modern workplace, new technological tools – such as big data, surveillance and monitoring systems, and artificial intelligence (AI) among others – are revolutionising the way in which processes, including HRM-related processes, are organised. This change may have significant consequences for social dialogue and HRM, including the standardisation and centralisation of practices and the devolving of some functions traditionally associated with HRM, such as payroll, to other departments, like finance. Big data and digitalisation have had an enormous influence on the behaviour of MNCs and the organisation of HRM over recent decades, and this influence is likely to continue and possibly accelerate. Digitalisation and new technology have also encouraged the standardisation of many HR processes. This increased digitalisation entailed in decision-making and organisational processes, as well as the growing use of big data, raise the question: do traditional HRM theories still apply to increasingly digitally controlled MNCs?¹⁰

European social partners, enterprises and workers are currently faced with a range of external factors that can determine the pace of diffusion of enterprise-level social dialogue, such as the need for enterprises to respond to rapid technical and technological changes (for example, digitisation, robotics, social media, etc.). These technological advances have also resulted in the emergence of new industries and services and new forms of enterprise and jobs that have resulted in the need for new approaches to how work is organised. The results of new discussion is the

¹⁰ Eurofound. Social Dialogue and human resource practices in European Global companies. 2020. Andrea Broughton, Eckhard Voss and Ricardo Rodriguez Contreras

new European Social Partners Framework Agreement on Digitalisation from 2020.

In Bulgaria there is a country *Innovation Strategy for Smart Specialisation 2014-2020*¹¹ adopted in late 2015, as well as *Concept for participation of Bulgaria in the 4th Industrial revolution* prepared.

Although that, according to the existing digital transformation enabling environment Bulgaria is in the group of '**Modest enabling environment**': together with Croatia, Greece, Hungary, Latvia, Poland and Romania. The *Digital Technology Integration Index* (DTII) measures the country digital technology integration in the three sectors related to 7 key technologies: Social media, Mobile services, Cloud technologies, Internet of Things, Cyber security solutions, Robotic and automated machinery, Big data and data analytics. Bulgaria is again at the bottom of the scale and falls in the category '**Unrealised potential**'.¹²

Still, Bulgaria is doing relatively well in the area of connectivity, especially in terms of wide access to super high-speed and mobile broadband networks. There has been progress in the eGovernment dimension, with an increasing number of users and a high appreciation for the delivery of digital public services to enterprises. Unfortunately, in respect to the Human Capital dimension Bulgaria registers significantly lower than average results - the share of people with minimum basic skills in the field of digital technologies amounts to about 29% of the Bulgarian population, while the EU average is 57%. Only 11% have above-basic skills, which is less than one third of the EU average.

¹¹ The Strategy was developed with the support of the World Bank. See World Bank (2012). GOING FOR SMART GROWTH. Making Research and Innovation Work for Bulgaria Report No. 66263-BG <http://documents.worldbank.org/curated/en/523731468239988272/pdf/662630ESW0P0780369270B00PUBLIC00ENG.pdf>

¹² See Smart productions and work organisations in the manufacturing: new scenarios for industrial relations. VS/2016/0093. National report for Bulgaria. 2018. Authors N. Daskalova, E. Ribarova. L. Tomev, R. Antova

The presented statistics clearly shows that the perception of digital technologies by the Bulgarian enterprises is slow. An ecosystem of digital and tech entrepreneurs has been gradually evolving in recent years, but investment in the digitalisation of economy is still limited. These insufficient investments, together with the shortage of ICT specialists, are the possible reasons for the slower digitalization in Bulgaria compared to other Member States. Although Bulgarians use social media intensively for personal use, only 9% of the companies use them to promote their business, compared to the EU average of 21%. Finally, the number of enterprises with a high intensity index represents only 7.81% of all enterprises. On a positive note, 23% of the companies share information online, compared to the EU average of 34%.¹³

According to the data of the European Company Survey 2019¹⁴, most of the enterprises in Bulgaria are either with limited digitalisation (47%), or partially digitalised: either with high use of robots and other digital technologies, but limited computer use (17-18 %), or with high computer use but limited use of robots of other digital technology (17-18%). Fully digitalised are only the rest of the enterprises –less than 20 %.

The current global situation caused by the COVID-19 pandemic has forced many enterprises in Bulgaria to take immediate steps to implement technology in the work processes in order to continue their activities as far as possible, depending on the operations of each company. The introduction of the ability to work from home (Home office) was widely accepted, due to the restrictions imposed by the government, in order to limit the spread of COVID-19. Through the new technologies for remote communication and the many options of online

¹³ See <http://www.nsi.bg>

¹⁴ EUROFOUND. CEDEFOP. European Company Survey 2019. Luxemburg.2019

platforms for meetings, the opportunity was provided for unimpeded conduct of business meetings at different levels in enterprises, which clearly showed that enterprises outside the manufacturing sector in Bulgaria can use new communication technologies and that this change does not harm their activity. In addition, the possibility for electronic signature on documents has become widespread.

Such steps certainly support and accelerate the processes of digitalisation of business in Bulgaria, improve the working environment and have additional beneficial effects on employees. By conducting meetings through online platforms, employees are given the opportunity to work in a more relaxed environment from home, thus limiting the noise pollution available in offices with open workspaces. In addition, more free time is provided for employees, due to saving time to reach the workplace, which has a positive effect on the mood and health of employees.

The positive effects for employers are reduced operating costs, optimized resources, improved planning, increased competitiveness and improved data collection and analysis.

Of particular importance for the digitalisation processes in Bulgaria are the actions of the enterprises after the COVID-19 pandemic - will the technological solutions introduced in the work processes due to the crisis be preserved, or will businesses and production return to the standard processes and traditional forms present before COVID -19? The current situation has clearly shown entrepreneurs the need to implement technology in the work processes and the positive effects resulting from the technological revolution. In order for Bulgaria to be in line with the trends of the other EU member states in terms of development of work processes and work environment, it is necessary to accelerate the processes and create appropriate conditions for the implementation of

technologies. The main role in the future technological revolution should be taken by the state and public authorities. Such action by the state will create the necessary conditions and regulatory security for businesses and enterprises to digitize the processes. This is set out in the state strategy for Industry 4.0, which is essentially the "Internet of objects and services". Industry 4.0 has a real potential to become an integral part of production and thus create extraordinary growth opportunities and competitive advantages for business. According to current forecasts, enterprises will be able to increase their productivity by about 30% if they use Industry 4.0.

Main dimensions of consequences, caused by the implementation of new technologies at company level

The increasing digitalisation of work processes around the world, in particular Europe and Bulgaria, contributes to removing barriers and creating a digital work environment in the EU with free movement of goods, people, services, capital and, of course, ensuring data security. The digital work environment will increasingly help to boost employment, growth, competition, investment and innovation and create opportunities to start new businesses and increase existing businesses through a new level of investment. The EU's aim in this regard is to strengthen the digital market and ensure that all Europeans and European businesses, both small and large, are part of the process.

At present the introduction of new technologies in the work processes, improving the organisation and working conditions, the introduction of fully digitalised technologies and processes still represents a great challenge for enterprises and businesses in general in Bulgaria. This is due

to the main problem faced by employers - low levels of basic digital skills among the majority of the Bulgarian population. According to data from a large-scale study on the level of digitalization in Bulgaria, the qualification of employees and the amount of investment are identified as a major obstacle for Bulgarian business in terms of further implementation of digital technologies and processes.

Many companies are finding digitalisation, big data and artificial intelligence (AI) a significant challenge. Some are dealing with this challenge by focusing on digitalising everything they are able to, rather than taking a more strategic view of actual functions and structures. Certain structures are therefore no longer human interactions but are standardised through technology. This loss of actual human interaction can potentially severely damage flows of information and the building of relationships between key actors in HRM and employee representation bodies in MNCs. It also affects employee participation and information and consultation in terms of removing routine and regular human interactions.

New forms of work organisation made possible by this technology (e.g. project-orientated work, higher flexibility, changing team structures, and 'agile' organisations) alongside a flattening of hierarchies or differences between management and employees/workers reduces interaction between the two sides. This change in work organisation could have a potentially negative impact on interest representation and the involvement and participation of worker groups in the social dialogue.¹⁵

The change will require constant improvement and development of qualification. It will be increasingly important to be able to quickly adapt

¹⁵ Eurofound. Innovative change in European companies. European company survey. (2013.). Published 2017. Authors S. Demetriadis. F.F. Eiffee.

to the new environment, to have the flexibility and openness to change. Two cores will be created in the enterprise - one consisting of highly qualified employees and another peripheral auxiliary core, which will constantly decrease. There will be no employees with one profession, but they will be hybrid, with several interrelated professions. The line between several professions will be blurred and one job will unite several positions.¹⁶

Changes in productivity, work intensity, work organisation, job characteristics, employment and skills requirements

In companies, which are under restructuring and implementation of new work organisation, equipment, technologies and production methods, trends of new stratification of the employees could be observed: the “old” production workers and employees in the company administration should work together with the workers, employed on restructured and renovated jobs and with new workers and high qualified technicians, engineers and other professionals, who occupy entirely new jobs.¹⁷

The role of labour is changing - in some enterprises and operations there are cases of simplification (entry of mainly manual operations), at the same time the use of significantly more complex operations is growing (automotive, other engineering, electronics, etc.).

There are tendencies of new professions emerging, especially in the service part of the enterprises (installation, repairs, diagnostics,

¹⁶ See Danube @ Work. Digitalization in the world of work and its' impact on the key sectors in Bulgaria, Romania, Serbia and Austria. A project of OGB-Austria. National report for Bulgaria . 2019. L.Tomev I(in Bulgarian and German).

¹⁷ See Smart production and work organisations in the manufacturing: new scenarios for industrial relations. VS/2016/0093. National report for Bulgaria. 2018. Authors N. Daskalova, E. Ribarova. L. Tomev, R. Antova

information service, maintenance, design, and construction) - this is shared by both union representatives and employers;¹⁸

Health and safety at work, special working conditions, for example, home and teleworking

Digitalisation and robotics reduce physical load. The signing of documents is done electronically, the transfer and storage of information is carried out through cloud services, and the communication is through e-mails and various communication channels (finance, trade).

In addition, employee awareness is rising. Most companies go through annual digital training, accompanied by a workplace safety test. It includes not only the use of various office materials and healthy working conditions, but attention is also paid to cyber security, the models hackers use to break through the company's protection and how prevention can be implemented (trade, tourism).

Work processes are becoming much faster and work on a global scale means that somewhere around the world some processes are running round the clock and the work does not stop. This can sometimes be stressful, especially if a longer stay at work is required due to the need to communicate and work closely with colleagues from an area with a big time difference from the local one. The exchange of information also creates the need to react quickly and in a timely manner. This is among the specifics of the financial sector not only in Bulgaria, but also everywhere in the world where there is open economic development.¹⁹

¹⁸ See Danube @ Work. Digitalization in the world of work and its' impact on the key sectors in Bulgaria, Romania, Serbia and Austria. A project of OGB-Austria. National report for Bulgaria . 2019. L. Tomev (in Bulgarian and German).

¹⁹ See Danube @ Work. Digitalization in the world of work and its' impact on the key sectors in Bulgaria, Romania, Serbia and Austria. A project of OGB-Austria. National; report for Bulgaria . 2019. L. Tomev (in Bulgarian and German).

Experts warn that digitalisation processes lead to a number of unfavourable consequences, because digitalization is another name for "big brother". "We are already witnessing many cases, in which total control over the entry and exit of workers, their movement during working hours, personal monitoring of workplaces is exercised. These are situations in which a person may feel uncomfortable. We see more and more employers who, when recruiting, in addition to asking for a CV, does their own research, search on social networks for the characteristics of the job candidates - something that was unthinkable 10 years ago."

Other negative effects can be expected. Stress and tension will increase. Addiction to the Internet will have an impact on the human brain. Communication between people will become a serious problem. Isolation from the natural environment makes communication difficult and soft skills are impaired.

A problem for people in the digital age will be the huge amount of information they have to deal with in a short time, the need not so much to know everything, but where to find specific data, how to make a connection between individual data. Creative and analytical thinking will be appreciated; the requirements for performing intelligent operations will increase.²⁰

Some of the employees are forced to work with atypical contracts- for example these who are involved in low qualified and manual operation are hired on temporary contracts, seasonal work , shared work etc. Also telework, temporary agency work (TAW), self-employment for high

²⁰ The same

qualified specialists in used in IT services, technique maintenance, data processing, Research and Development (R&D), etc.²¹

For some groups at workplace – mainly in maintenance, IT services etc. it is possible to increase the usage of flexible working hours;²²

New inequalities in the workplace are emerging: highly skilled and well-paid workers and engineers working along with low-skilled and low-paid workers, as well as workers with atypical contracts (automotive, other machinery, electronics, chemical and pharmaceutical industries).

Most companies currently work standard working hours, but there are beginnings of flexibility, as well as individualisation of labour organization or work in small groups. Shift work is also growing (automotive, chemical industry).

Despite the reduction in the volume of heavy physical work and dangerous work environment, there is a tendency of monotony increase, stress and alienation at work.²³

Individual and group work in the enterprises, job enrichment and job rotation, increasing of workers responsibility, occupational stress

The working teams continue to be big or medium sized for the manual workers and for implementing of some other “fordist” type operations, the teams for design, construction, maintenance, R&D, information service and other business administration operations often teams are still medium sized, but for workers, involved with new machines and systems rather small teams of /and individual work are established;²⁴ The

²¹ See Danube @ work, mentioned above; New forms of employment in Bulgaria, Project of Center for Economic Development, Sofia, funded by the EU. 2019. Author M. Prohaska

²² See Smart production and work organisation in the manufacturing: new scenarios for industrial relations, mentioned above

²³ See Danube @ work, mentioned above

²⁴ See Smart production and work organisation in the manufacturing: new scenarios for industrial relations, mentioned above

autonomy at work is increasing, but alienation and monotony also increase;

The intensification of work and excessive connection to work-linked devices are likely to damage the balance in life, and even to harm employees' health.²⁵

Changes to remuneration and benefits, etc.

According to most trade union representatives involved in various surveys, despite the growth in productivity due to the use of new equipment and technologies, wage growth is not adequate (mechanical engineering, chemical industry, etc.).²⁶

The wage differentiations became even higher and for the new highly qualified workers the wages usually are not adequate to the level of the increasing productivity, intensity at work and responsibility related to introduction of new technologies (interviews of social partners in the chemical and pharmaceutical industry and machine-building)²⁷;

Importance of the changes for humanising work and improving occupational welfare and work-life balance

New workforce has new interests: the traditional interests in job security, wages, H&S at work are still present, but they are changing in the new context. For the high qualified employees the security is not as much important as they do not face a serious competition at the labour market; payment is expected to be according to the productivity and pay differences are accepted easier; concerning the H&S the interests are

²⁵ The same

²⁶ See Danube @ work; Smart production and work organisation in the manufacturing: new scenarios for industrial relations, both mentioned above

²⁷ See Danube @ work; Smart production and work organisation in the manufacturing: new scenarios for industrial relations, both mentioned above

more focused on the prevention of stress, provision of rest and recreation,

The importance of some interests, such as improvement of qualification and skills, career development, work-life balance, better socialisation at work-place, better relationships with co-workers and receiving adequate information, increased.

There is evidence that values changed from rather collectivistic to more individualistic and more focused at the future and sustainability, rather to the fordist “bread and butter” values.

At the same time the other groups of workers don't change much their main interests, which concern higher payment, job security, H&S at work. The atypical workers are mainly interested in job security and regular payment of wages. Their values are still short-term focused.

There are also groups of workers who have “transition” status – they are interested in training for new jobs, possible outplacement in cases of company restructuring.²⁸

Changes to the industrial relations system after implementing new technologies –and new challenges

The industrial relations in Bulgaria are still not as much affected by the Industry 4, 0, digitalisation and platform economy. In some of the sectors, where the smart production is already used (machine-building, including automotive, electronic production, chemical and pharmaceutical production and others) some changes in the scope and subject of collective bargaining and consultations at company and sectoral level have been made. In some of the utilities (energy production and supply, transport, telecommunications and posts, water supply) and in the public administration the digitalization is used, but it has caused changes mainly

²⁸The same

in the number of employees and to some extent in the subject of consultations and collective negotiations. In private services like IT-s and finances the digitalization is more advanced, but its' influence on the industrial relations could be evaluated only on the base of several cases, as like in most of private services the trade unions either do not exist or are with too low level of density.

Experts predict also radical changes for trade unionism. The form of 'association' will change. According to employers, 'professional association' will rather be observed. Content work will intensify if unions offer training forms to improve the self-development of their members. Research and scientific circles emphasize the need for trade union efforts to focus on providing "universal basic income" (UBI) that could neutralise the effects of technological unemployment.

The trade union experts themselves report that *the risks for unions are many, but at the same time the opportunities are significant. According to them, trade unionization and collective bargaining in the digital world should provide the pragmatism and security that every worker seeks, regardless of the level of technological development that society has reached. "The risk is generational. If we slow down the change of generations in the unions, if young people do not see a motive to join the union, at some point we risk the people involved in the unions to see in the digital economy something unknown to them, to see a threat to themselves. In my opinion, this is a real situation in Bulgaria."*²⁹

In summary, according to the interviewed social partner, industrial relations are not undergoing significant transformation nowadays. However they must be in line with the introduction of the new technologies. Trade unions should focus on retaining employees in developing industries by participating in the following processes: 1)

²⁹ See Danube@ Work, mentioned above

delivering vocational trainings which increase workers' employability; 2) encouraging life-long learning at the workplace; 3) allocating workers within the company regarding their current qualification; 4) reducing new forms of work related stress. Trade unions should also play role in establishing new vocational centres for training of employees (which centres correlate to the business and its needs) and in attracting dismissed workers who have developed their own business as subcontractors to the smart production companies.

3. The role of direct and representative participation for improving the enterprise activity sustainability and improving work environment and industrial relations

There is already an impact of direct participation on the results of enterprise management, labour and industrial relations at company level. It concerns the improvement of practical skills of the workers, recognition of non-formal and formal qualifications and also the increase of the productivity. The last one led to some increase in wages, mainly with the implementation of bonus systems for payment. There are also opportunities for improvement of the results increasing motivation for work in all the three companies, which depends on the management approach and to some extent on the trade union and other workers representatives' views and suggestions concerning the policies of direct participation.

Some authors have suggested that participation enhances innovation by enabling the integration of different ideas, suggestions and solutions (Sawyer, 2006). Wang et al (2015, p. 1162) stated that 'employees' intimate knowledge and experience about their firms' businesses and operations enable them to generate innovative ideas to improve and/ or

develop new products and processes'. In their study, they provided evidence for their hypothesis that the percentage of participatory employees has a strongly positive effect on innovation. Other studies explore the link between employee participation and innovation in specific types of establishments, sectors or countries. Andries and Czarnitzki (2014), for example, provided evidence that for process innovation performance, small firms benefit greatly from involving non-managerial employees. They also identified that employee participation has a positive effect on product innovation performance.³⁰

Research on the precise role and effects of representative participation in innovation is still relatively scarce. Issues focusing on the direct participation of workers in innovation are addressed in the literature on employee-driven innovation and employees' innovative behaviour. Employee innovative behaviour is defined as employee behaviour that implies the generation, introduction and/or application of new ideas, processes, products and procedures that are potentially beneficial for the unit the workers belong to. Using this definition, the type of innovation initiated by workers is more comprehensive and far-reaching than is suggested by the term 'incremental innovation'.³¹

The results of previous studies show similar attitudes of both employers and union representatives in the understanding that direct participation could improve corporate governance and sustainability due to the more efficient use of human capital. It is about finding effective mechanisms to stimulate the development of this process. The representatives of the employers' organizations justify the importance of direct worker participation with the need to improve the work results and according to them it makes sense mainly for this purpose.

³⁰ Eurofound. 2017. Innovative changes in European companies. 3d European company survey (2013). S. Demetriadias, F.F. Eiffee

³¹ The same

According to trade union representatives, including also the leadership of the CITUB, the main challenges are trade union identity and values, which still are the same like in the “fordist” age. They think that trade unions should not oppose to the new technologies, they rather should try to adapt their area of protection activities structures and methods according to the industrial change. Trade unions should focus on improvement of workers’ skills and qualifications and life-long learning. At the same time trade unions should identify or establish new values, in regards to the new “individualistic” values of the employees in the new digital workplaces and young employees. Trade unions have to change some of their methods, using more “digital” means of communication.³²

II. National and sectoral dimensions of the role of digitalization for direct employee participation in management

1. General context

If we refer to the results of the previous DIRECT project and other studies, the degree of development of direct participation in the country represents a rather contradictory picture. On the one hand, according to the opinion of the representatives of employers’ organisations (BIA – headquarters and branch chambers of metallurgy, production of fruit and vegetables, breweries, road transport, recycling industry, etc.), direct participation is applied in 10 to 50% of the enterprises that are their members. On the other hand, from interviews and analyses of situations in enterprises it is clear that there are different dimensions of perception of direct employee participation by employers and also by trade unionists and other workers’ representatives. Ordinary briefings and daily

³² See Smarty production and work organisation in the manufacturing: new scenarios for industrial relations, mentioned above

communication with employees are often accepted as direct participation. Even if such forms of communication represent direct provision of information and advice by themselves, they are not sufficient to identify such undertakings as applying direct participation.

At the same time, digitalisation of the individual sectors (as a whole for the country, as well as those included in the scope of research of the current project DIRECT-2 and those from the previous DIRECT project) is with varying degrees of progress. The very processes of digitalization do not always affect directly the work organization and the direct employee participation in management in enterprises and industries. In some industrial sectors (e.g. the metal industry, in particular some branches of mechanical engineering, electronics and electrical engineering, chemical and pharmaceutical industry, production of cement and other construction materials), as well as in the service sector (some transport branches, telecommunications, information services, finance and banking and others), digitalization is more advanced in comparison with other sectors. In some of them there are enterprises with modern forms of work organization and well developed direct employee participation in management.

In addition, the COVID pandemic has had an impact on “forced” digitalisation and the introduction of forms of work such as teleworking or home-based work, as well as mobile ICT work, both for those working in some industries (mainly those employed in enterprise management) and in the sphere of services (on-line trade, banking and insurance, transport - ticket sales, reservations, work of employees in energy management, water and sewerage, etc.) and those employed in the budget sphere (public administration, education, science and research - where possible).

2. Approach to the selection of key sectors for the study.

In this context, the approach used to select key sectors to explore in the light of the dimensions of digitalization (sector and enterprise level) and the opportunities for direct employee participation in management is based on several points of reference:

- A) Selection of sectors/and enterprises in which there is progress in the field of digitalization and/or experience in the field of direct employee participation in management and other forms of representation (information, consultation, participation in supervisory/management bodies of enterprises and others);
- B) Sectors in which the degree of digitalization is more moderate, as well as those in which the forms of work organization involving direct participation are less developed, in order to make comparisons;
- C) Selection of sectors and enterprises from both industry and services;
- D) Selection of sectors and enterprises that are not represented in the previous project.

In the light of these requirements, two sectors of industry were selected for the purposes of the study - mining and chemical and pharmaceutical industries, and from the sphere of services - construction and telecommunications.

The main sources of information were opinions and information sets of national and branch employers' organizations and national and sectoral trade unions. In addition, data from previous studies and projects were used.

The study included representatives of the headquarters of the Confederation of Employers and Industrialists in Bulgaria (CEIBG) and several branch chambers, members of CEIBG. The branch chambers, members of CEIBG are the following:

- The Bulgarian Chamber of Mining and Geology, which in addition to mining and processing enterprises also includes enterprises for the production of cement and construction materials, which often include quarries for the extraction of the necessary raw materials;
- The Bulgarian Generic Pharmaceutical Association, which covers mainly large pharmaceutical companies;
- The Bulgarian Construction Chamber, whose members are mainly construction companies (does not cover enterprises for the production of construction materials).

On behalf of the trade unions, representatives of CITUB headquarters and several sectoral federations - main members of CITUB were included in the study:

- National Federation of Labour "Chemistry and Industry", which covers organizations in enterprises of the chemical and pharmaceutical industry, as well as the production of cosmetics;
- Federation of Independent Construction Trade Unions, which includes trade union organizations from construction companies and organizations from companies for the extraction of non-metallic raw materials and production of construction materials;
- Trade Union Federation of Communications, which covers trade union organizations from the postal services, telecommunications and information services.

3. Characteristics of the sectors and degree of digitalisation

A more moderate and/or more advanced application of digital technologies is found in the surveyed sectors and in the CEIBG enterprises in general.

According to CEIBG representatives, many of the enterprises that are their members use new technologies, incl.

- automation;
- wide application of computer and other digital technologies

In many enterprises, the impact of new technologies on the enterprise's operations, the nature of work and employment relations is being registered. Phenomena have been observed such as:

- Growth in the skill level requirements for workers;
- Changes in the organization of work and working time;
- Changes in working conditions and occupational safety and health.

According to CEIBG representatives, the new information and telecommunication technologies, including digitalisation, affect every industry, change the positioning of the market leaders and create new business opportunities. To overcome competition, manufacturers need to rethink every aspect of their business, become digital enterprises and take advantage of new technologies at every stage of their work - to reduce development time, increase production efficiency and create new business opportunities.

In this context, CEIBG is actively involved in the process of developing and implementing policies, which support Bulgarian business in its quest to develop its competitive advantages in the new situation and meet the new challenges of the 21st century.

Sectors and sectoral dimensions

A) In the pharmaceutical production, as well as in the related sectors of chemical and cosmetic industry, many small and medium enterprises are included, but the actual drivers of the digitalisation processes in the sector are large companies. Specifically for Bulgarian Generic

Pharmaceutical Association, its members are mostly large enterprises with an average number of employees ranging from 101 to 1000. The number of employees in the chemical industry as a whole, including the pharmaceutical industry is 53 864 for 2019.

B) In **the mining industry and the production of construction materials** the average size of enterprises is also between 101 and 1000 employees, with the Bulgarian Chamber of Mining and Geology comprising mostly of large companies, including companies that cover a partial or full cycle of extraction and enrichment activities /or extraction - processing and production of finished products - mainly enterprises for extraction of raw materials for the construction industry and the production of cement and other construction materials. In these industries, digitalisation is more advanced in the processing companies, especially in those for the production of cement and other construction materials. The number of employees in the mining industry for 2020 is 20540, registering a slight increase compared to previous years.

C) The **construction industry** is dominated by small and medium-sized companies, but specifically for the members of the Bulgarian Construction Chamber the average number of employees in companies is also between 101 and 1000. The Chamber is comprised of companies of different sizes, both large, medium and small construction companies. The rate of digitisation in this sector is somewhat slower, although there are a number of elements of technological progress. The number of employees in this sector is 118 979 for 2020, but there is a large number of self-employed and a significant gray sector.

D) In **the communications sector, mainly telecommunications and post**, the size of enterprises is different, and along with the traditional large companies with 1000 and more employees there are a number of new,

smaller ones, mainly in the postal and forwarding sector.³³ In telecommunications, the companies are mostly large - both for fixed and mobile telecommunications or providing both types of services, while in the postal sector the larger company is the state-owned Bulgarian Posts and the rest are mostly small and medium-sized, with larger companies being mainly in the forwarding services. The total number of employees in the telecommunications and information services is 99 626 for 2020, with a slight decrease compared to 2019.

The interviews conducted with representatives of branch employers' organizations members of CEIBG and trade union federations affiliated to CITUB, give an additional dimension to the degree of digitalization of individual sectors and industries.

In the chemical industry as a whole, the level of modernization and technological innovation is generally above the national average, but specifically the digitalization of individual management activities is in the range of 25 to over 40%. Digitization of various operations in the creation of new alloys and materials, nano-technologies, etc. is used. In management, incl. planning and forecasting, supply, marketing and sales, as well as in research and development and others, digital operations are also used.

Specifically in the pharmaceutical industry, there is introduction of new technologies, such as automation, use of electronic communications, computer hardware, intranet, platform work (algorithms) and others. New production systems - lean, "just in time", "world class manufacturing" (WCM) are also introduced. Where it is used, this has an impact on the organization of work: enrichment of the content of labour for individual jobs, rotation of jobs, group/team organisation of work.

³³ There are no interviews for these two sectors by branch chambers, as they are new and are not members of CEIBG.

According to the representatives of the Bulgarian Generic Pharmaceutical Association, the introduction of new technologies leads to an increase in the number and relative share of environmentally friendly jobs, as well as to improved actions to ensure decent, safe and healthy working conditions. Nowadays modern manufacturers “are no longer just creating, they are the thread connecting the entire product life cycle, and in order to develop in today's environment, they must increasingly rely on technology to drive breakthrough innovation and stimulate smarter operations”

At the same time, according to other studies and analyses, for the chemical industry as a whole, incl. pharmaceuticals and the production of perfumes and cosmetics, there is a tendency of shortage of qualified staff, namely in the context of the digitalization processes and the introduction of new technical and technological solutions. The need to increase the qualification of the available staff in the light of the digital transformation is also pointed out.

Automation, electronic communications, computers, software have been introduced in the mining industry and the production of construction materials. Out of the production systems, “world class” manufacturing and lean production are used. New forms of work organisation are used as in the pharmaceutical industry, such as: enrichment of jobs, job rotation, group/team organization of work.

According to previous research and analysis, there is still a high rate of occupational injuries in this sector. In this context, the new technical and technological solutions used should be aimed at improving occupational safety, personal security and reducing physical and mental risks at work.

In construction the new technological solutions are mainly represented by automation and wide application of electronic communications. The

representatives of the Bulgarian Construction Chamber also point out the use of computer hardware, software, platform work (algorithm) and others. The new production systems include lean production, "total quality management" (TQM), "world class" manufacturing and others.

Both the representatives of the employers' organisation and those of the trade union federation note the use of technologies related to "workplace risk assessment" in the construction sector. The working environment is also improved by introducing flexible working time, improving healthy and safe working conditions and the use of flexibility in the performance of tasks, including job rotation and work from home (for certain occupations). Group/team organisation of work, job rotation and job enrichment are also used.

For the construction sector, previous research and analyses also point to the shortage of qualified staff, especially young people, and the need for additional qualification in the context of digitalisation.

At the same time, there is still a high rate of occupational injuries in this sector, so digital transformation processes are expected to be oriented precisely towards reducing the risks of accidents and mishaps, improving the physical safety of employees and improving personal security and job satisfaction.

In communications the COVID pandemic has virtually led to a resurgence of postal and courier services, especially due to the growth of online shopping and delivery. Expectations are for the development of deliveries with drones and autonomous vehicles, use of robots, etc. in future.

In telecommunications, digitalisation processes have been steady for years, with management processes taking into account impact on employment, working hours, working conditions.

According to the representatives of the Trade Union Federation of Communications with CITUB, a number of new technologies are used within communications (post and telecommunications), without intranet systems.

Most interviews note the impact of digitisation processes and other new technological systems on production/provision of services, labour and labour relations. For example, in some of the sectors changes in employment are registered - *pharmaceutical industry, communications*. An increase of the requirements to the levels of workers' qualification for holding certain positions is registered in the *mining industry and production of construction materials, pharmaceutical production, and communications*.

New technologies have an impact on the organisation of working hours, schedules and others in the *pharmaceutical industry, construction and communications*.

Another aspect is the impact that new technological solutions have on the level of safety and health at work, incl. safety of the means of work, materials, work premises and working environment. These processes are found in the *pharmaceutical industry, construction and communications*.

As already mentioned, especially for construction there is still a high level of occupational injuries and it is logical that the processes of digitalization and the implementation of other new technical and technological solutions affect safety and health at work. Interestingly, no such impact is recorded by the data on the mining industry, where there is still a high level of occupational injuries.

The COVID pandemic has been important for the advancement of new technologies and the increase of their role in the organisation of work and the working environment. This applies to almost all sectors surveyed.

According to the representatives of CEIBG the application of digital technologies is growing in the pandemic and new forms of work organisation and communications are used in the majority of the sectors they cover through their member branch organizations and enterprises. This includes growth in the use of:

- Communications via mobile phones and e-mail;
- Online meetings and conferences;
- Use of teleworking and mobile working through ICT
- Growth of the role of social networks and media

In the face of the pandemic spread of COVID-19, the management of CEIBG has introduced changes in the organisation of the meetings and events it holds in a timely manner. They take place mainly online (webinars, online meetings and conferences) and personal contact is kept to a minimum.

A similar approach is used for internal communications within CITUB as well.

A number of changes have been implemented in the construction sector, including based on risk assessment, on how to perform tasks in the context of a viral pandemic. Forms of instruction briefings are in place, including based on risk assessment, for the proper use of work equipment provided to workers, protective equipment, and for following employers' instructions for occupational safety and health and environmental protection. Employees are instructed to immediately eliminate as far as possible any hazard they have identified (through corrective measures) or to secure the hazardous area and inform the responsible manager immediately. All organisational measures, as well as cleaning, hygiene and relevant rules of conduct are strictly observed. Personal protective equipment is worn and contact during work is limited.

The use of all electronic means has been increased - e-mail, mobile phones, social networks, video conferencing, intranet and internet. Remote work is used for the positions for which this is possible. There is also a growing use of IT communications within the trade union federation (Federation of Independent Trade Unions in Construction), its main organisations and the relationship with trade union members.

The use of ICT - intranet, mobile phones, e-mail, video conferencing, social networks and remote work is growing in the pharmaceutical industry. According to the representatives of both the branch chamber and the federation, the challenge that companies now face is to take adequate actions and measures and prove to employees that their work environment is really safe and healthy. "The main challenge is undoubtedly to preserve the life and health for all. The working environment can be adequately transformed and information technology is the tool in the hands of employers to bring the right changes to the workplace. Everyone in the company should work as one body at the moment. Competition has no place; synergy is needed because the enemy is common. "The representatives of the branch chamber and the federation are of the opinion that the Working Conditions Committees propose appropriate measures for the enterprise in order to minimize the risks. It is assumed that they are very well acquainted with the work processes, the premises and the specifics of the activity of the respective company. Their role at the moment is very important: they must be proactive and informed about the dynamics of the situation, both in Bulgaria and abroad, and offer effective, workable and feasible solutions.

In the mining industry and the production of construction materials, the use of electronic communications, video conferencing, etc. is growing in the conditions of the COVID pandemic. Remote work, where possible, is also applied.

In communications, and specifically in telecommunications, remote work has been used even since before the pandemic. After the beginning of the pandemic, its use has increased. Several projects on the impact of digitalisation on labour processes have been carried out in the framework of UNI-Global and Uni-Europe, in which the Trade Union Federation of Communications has also participated. The projects concern overcoming the effects of the pandemic; improving the digital skills of postal workers; digitalization in telecommunications and the implications for employment and working conditions, etc.

4. Main trends in industrial relations and workers' representation.

There is an organised workforce in the sectors studied, as well as organized employers in most of them. Industrial relations develop both at the enterprise level, (for most or some of the enterprises) and at the sector level (industry/branch/economic activity).

4.1. Social partners – state and representativeness

Trade union organizations

The sectors under consideration have varying degrees of union density and employee organisation. Trade union density ranges from the national average to slightly above the average (mining and production of construction materials), below the average (pharmaceuticals and chemicals, postal services), to low (construction, telecommunications) and almost symbolic (information services). In the pharmaceutical industry, mining and production of construction materials there are trade unions in 50% of the enterprises, and in construction - in 5% of the enterprises.

Trade unions exist in the two large national scope companies - the state-owned Bulgarian Posts and the private BTC-Vivacom, and there are

separate small trade unions in some of the information technology companies.

Employers in mining, construction and production of construction materials are well organized and there is one large and representative organisation for each industry: for the mining industry (including extraction of non-metallic minerals and production of construction materials) and for the construction industry. For the chemical and pharmaceutical industries there are multiple employers' organizations, but the scope of organization of employers is generally lower.

In posts, telecommunications and information technology there are new associations that have predominantly business functions.

4.2. Social dialogue, collective bargaining, information and consultation

Social dialogue takes place in all sectors. In posts and telecommunications it is mainly at company level.

In the chemical and pharmaceutical industries there is social dialogue at both sector and company level, but collective bargaining takes place only at company level and not in all companies. Collective bargaining at the sector level has been virtually suspended for more than 15 years, the main reason for this being resistance from employers' organizations, both in the pharmaceutical and other branches of the chemical industry, as well as from individual companies - members of the branch chambers. Collective agreements cover 15% of the companies.

However, framework agreements have been signed within the chemical industry sectors in 2020 - a Memorandum covering objectives and guidelines for action on the COVID pandemic, joint actions on the effects of the Green Deal and actions on the effects of digitalization. This Memorandum has been signed by the Bulgarian Chamber of Chemical

Industry³⁴ and the National Trade Union Federation “Chemistry and Industry” with CITUB.

For the chemical and pharmaceutical industries there is also a tradition of tripartite partnership, mainly on occupational safety and health.

In the mining industry, there is a well-developed social dialogue and collective bargaining and negotiation both at sector (bipartite and tripartite) and enterprise levels. The sector-level collective agreement, which has been signed by the branch chamber, also covers the enterprises for the production of construction materials that are members of this chamber. In the mining, beneficiation and construction materials industries, there is collective bargaining, working conditions committees and other forms of worker representation.

In construction, there is also social dialogue and collective bargaining at sectoral (bipartite and tripartite) and enterprise level, with sectoral collective agreements covering mainly construction companies.

In 2020, the Bulgarian Construction Chamber and the Federation of Independent Construction Unions signed a Memorandum of Cooperation and Partnership on the implementation of preventive measures to limit the spread of COVID-19 in enterprises in the construction sector, as well as a Framework Agreement for Action on the Green Deal.

The majority of construction companies have elected representatives for working conditions committees and a number of them have information and consultation representatives. According to trade union and employer representatives, working conditions committees help to easily and quickly disseminate information about the global COVID-19 pandemic and the measures and protocols taken to address it.

³⁴ It is not specifically covered in the study

In communications - posts and telecommunications - social dialogue is mainly conducted at the company level, as most medium and small enterprises do not have trade unions. However, there is a good social dialogue and company CLAs in Bulgarian Posts and BTC-Vivacom with coverage of over 95%. Bilateral dialogue for communications or for individual economic activities has not been developed in recent years, due to the fact that in most new private companies there are no trade unions, employers are relatively recently organised and their organisations so far carry out mainly business functions. Tripartite partnership existed for communications until 10-15 years ago, but currently it has also been frozen, for the reasons given above for the bilateral dialogue at the sectoral level. Furthermore, communications are not regulated by a separate agency, they are currently regulated by the Ministry of Transport and shall be transferred to the Ministry of e-Government, which is to be established with the new government.

In most of the sectors under consideration, there is information and consultation experience, both through elected representatives (chemical and pharmaceutical enterprises, some production of construction materials enterprises, construction, etc.) and directly through trade unions. The information and consultation systems are well developed in some of the MNC divisions: some companies for the production of construction materials (Holcim, HeidelbergCement), construction (Strabag), the chemical industry (Solvay) and the pharmaceutical industry (Teva Pharmaceuticals), as well as in a number of other companies which are not MNC divisions. In the above-mentioned MNC divisions there are elected representatives in European Works Councils (EWC). BTC-Vivacom also has EWC experience as for a period of time (2011-2013) part of the company (the technical infrastructure) was outsourced by the French Alcatel-Lucent and during that period there

were elected EWC representatives in the company by the employees in the Bulgarian division.

5. Direct worker participation - national and sectoral dimensions

5.1. Overview

The national social partners do not have specific direct participation policies, which was also found in the research on the previous project. Although the employers' organizations: CEIB – the Confederation of Employers and Industrialists in Bulgaria (participant in the current project) and BIA – the Bulgarian Industrial Association (participant in the previous DIRECT project /2017-2018/ and an associate partner in the current project) are generally supportive of direct participation, there are no specifically formulated strategies and policies for direct participation at national level. This also applies to other nationally representative employers' organizations and their branch structures.

Trade unions are also taking initial steps in this area. CL Podkrepa does not have such a policy, and CITUB, which is the main contractor for this project, supports the conduct of research and projects in this area, but does not have a specifically developed policy. There are also some reservations and concerns on the part of the trade unions about the possibility of direct worker participation being used by employers to reduce the influence of unions.

Direct participation is applied in some of the companies that are members of the CEIB as well as in other companies, mainly MNC divisions. Practices are often linked to the application of specific production systems (lean, just-in-time, etc.), team work organization, job rotation, job enrichment, etc. Many of these companies also use new/digital technologies.

The main forms used in the companies, members of the CEIB are:

- Individual consultations
- Individual delegation
- Group consultation
- Group delegation

Direct participation is mainly applied by decision of management teams, but there are also cases of consultations and agreements reached with trade unions, as well as at the request of employees or their other representatives.

Sectoral dimensions of the implementation of direct participation in management

Most social partner representatives interviewed referred to the use of various forms of direct communication with workers in enterprises, as well as forms of work organization and direct participation in management.

For all sectors, the social partner representatives interviewed indicate forms of direct communication used by management teams and direct communication of line managers with employees.

For the pharmaceutical industry a wide range of communications with workers are used: in-house magazines, leaflets, notice boards, videos, intranet, meetings to improve occupational safety and health, meetings with managers at different levels and also different trade union channels.

For the extractive industries, including mining and the production of construction materials, the use of leaflets, videos, intranet, trade union channels, etc. is indicated.

For construction, the Bulgarian Construction Chamber has indicated that it has a policy of encouraging direct participation. The following forms of direct communication with workers are used in construction:

- Online (intranet, text messages, emails, etc.)

- Occupational health and safety (OHS) meetings before the start of the shift;
- Management meetings and/or briefings with staff
 - o Senior management
 - o Middle management
 - o Supervisors/managers
- Use of trade union channels for communications on work issues, working conditions and social dialogue in enterprises.

Video conferencing, e-mail, leaflets, brochures etc. are used in communications (posts and telecommunications).

Various forms of direct worker participation in management are also indicated for most sectors.

Such forms are used in 30% of companies in the pharmaceutical industry, but there are no arrangements at sector level. Decisions are taken mainly by management teams. The companies where forms of direct worker participation are used are mostly large, including MNC divisions. These include:

- Teva Pharmaceuticals
- ✓ Dupnitsa
- ✓ Troyan
- Sopharma
- Ecofarm
- Antibiotic - Razgrad
- Danhson - Radomir

In the mining and production of construction materials industry, forms of direct participation are applied both by decision of management teams and after consultation with trade unions

The main forms of direct participation used in the sectors studied are distributed as follows:

- Individual consultations: *mining industry, production of construction materials industry, pharmaceutical industry;*
- Individual delegation: *extractive industry, production of construction materials, pharmaceutical industry;*
- Group consultations: *mining industry, production of construction materials, pharmaceutical industry, communications;*
- Group delegation: *pharmaceutical industry, communications;*
- Other (meetings with managers, pre-shift meetings, worker suggestion systems, etc.): *in all sectors, including construction and other branches of the chemical industry.*

5.2. Industrial relations and direct worker participation in management.

In general, social partners at national and sectoral level indicate that direct worker participation in management develops after consultation or agreements with trade unions. Even in cases of unilateral decisions by management teams to apply forms of direct participation, trade unions are informed. In individual cases there are also partial agreements with trade unions on the application of specific forms of work organization and forms of direct worker participation in management.

Trade unions have also been informed and in some cases consulted in enterprises where other workers' representatives have been elected such as:

- information and consultation representatives;

- representatives for the protection of employees' interests (under Article 7(2) of the Labour Code);
- working conditions committees;
- plenipotentiaries for the assembly of plenipotentiaries;
- representatives in the general assembly of shareholders and/or in supervisory/management boards with an advisory vote, etc.

Sectoral dimensions

For individual sectors the following trends of industrial relations influencing direct worker participation in management emerge:

Information and consultation with trade unions has been conducted in enterprises in the mining and production of construction materials industries, pharmaceutical industry, and communications (for the latter in 50% of the cases).

Negotiations and agreements with trade unions have taken place in individual cases for most sectors. For communications (Bulgarian Posts and BTC-Vivacom) this has taken place in 30% of the divisions and there have been agreements in 45% of the divisions.

Other workers' representatives were informed in 50% of the cases in the mining and production of construction materials industries, in individual enterprises from the pharmaceutical industry and in 30% of cases in communications.

Other workers' representatives have been consulted in most sectors; in communications this has been done in 25% of the cases.

6. Main results and impact of direct worker participation in management on the working conditions and operations of enterprises in the context of digitalization

At the national level, it is relatively difficult to assess what the practical results of the introduction of direct worker participation in management have been, especially since such information is not yet collected and aggregated by trade union federations and confederations.

On the employers' side, there is a little more clarity. The answers of the surveyed branch organizations - members of the CEIB, indicate that the introduction of direct worker participation in some sectors could contribute to:

- Improving work organization and working time;
- Increasing skills;
- Improving workplace welfare;
- Better work-life balance;
- Improving employee satisfaction and motivation.

These factors affect the labour productivity and profitability of the enterprise as a whole and hence its competitiveness.

In some of the sectors surveyed, their members have introduced new technologies in the last five years, most often in the form of automation, communications, computer hardware and software. The introduction of new technologies has mainly had an impact on the change in the staff qualification requirements, changes in employment levels, health and safety rules and procedures and the organisation of working time. These changes are generally easier to implement with greater employee involvement, which is achieved through various forms of direct communication and direct employee participation in management. At the same time, some of the changes brought about by digitalisation reinforce the role of the human factor and the autonomy of workers, which is achieved by introducing direct participation in management.

Sectoral dimensions

According to employers' representatives in the pharmaceutical industry, direct worker participation can contribute significantly to increasing company productivity, competitiveness and profitability, but can also improve the quality of work and promote greater social cohesion. This is very important when using information and communication technologies, which are embedded in new production and management processes, change organizational boundaries and transform patterns of value added, competition and consumption.

For the pharmaceutical industry, the employer representatives also comment on the impact that direct worker participation and the accompanying or preceding innovations in production systems and/or work organisation in enterprises can have in terms of wage formation, incl.:

- Recognition of uncertified personal skills;
- Recognition of formal skill qualifications;
- Greater flexibility in the performance of work tasks;
- Increase in individual output;
- Increase in output volume as a result of teamwork;
- Improved product/service quality.

For the mining and production of construction materials industries, employer representatives indicate that direct participation in management leads to improved individual output and also group output due to the fact that group work organization leads to greater flexibility.

The representatives of the Federation of Independent Construction Trade Unions with CITUB point out that after the introduction of new technologies direct participation can lead to effects such as: improving

the efficiency of enterprises, increasing productivity, improving work organization, humanizing the working environment, etc.

The consequences of the implementation of direct worker participation in management, which is accompanied by digitalization, change and innovation in production systems and work organization, can be grouped into two main directions:

A. Impact on the activity of enterprises. In this aspect most results are indicated as positive, including:

- Innovation development: *mining industry, production of construction materials, pharmaceutical industry;*
- Easier and quicker implementation of new production systems: *mining industry, production of construction materials, pharmaceutical industry;*
- Improving labour productivity: *mining industry, production of construction materials, pharmaceutical industry;*
- Improving production and labour efficiency and competitiveness of enterprises and products/services: *pharmaceutical industry;*
- Improving the quality of products/services: *pharmaceutical industry.*

In general, it is noteworthy that the positive results and impact on the activities of enterprises are indicated only by industry representatives; there are no such positive trends indicated by the construction and communications representatives. For the latter, the degree of impact on performance and activities of enterprises is generally less easily measurable, due to the fact that they provide typical services and depend heavily on supply and demand and on customer and consumer attitudes. For construction, we can suggest that since there is less progress in terms of direct participation, it is also difficult at this stage to assess its impact on the activities of enterprises.

B. **Impact on work and employment.** Both positive and some negative consequences emerge here.

Among the positive outcomes and consequences, emphasis is placed on:

- Improving the skill level of the workforce: *pharmaceutical industry, construction;*
- Improving work organization: *all sectors studied;*
- Improving the organization of working time, work and leisure regimes: *all sectors studied, excluding communications;*
- Improving occupational safety and health: *pharmaceutical industry, construction, communications.*
- Improving work-life balance: *pharmaceutical industry, construction;*
- Improving wage formation and additional remuneration mechanisms: *mining industry, production of construction materials, pharmaceutical industry;*
- Introduction of forms of employee financial participation: *pharmaceutical industry*
- *Workplace welfare development: mining industry, construction materials industry, pharmaceutical industry;*
- *Increasing work motivation: mining industry, building materials industry, pharmaceutical industry; construction.*

The positive impact of direct participation in management on work and employment is reported in all sectors studied. Particularly for communications it is weaker – direct participation impacts mainly OSH and work organization. For construction, no impact is recorded on formation and amount of wages, financial participation, and workplace welfare. Conversely, for the mining industry the main results indicated are the impact on the formation and amount of wages, welfare in the

workplace, motivation for work, but there is no impact on skills and safety and health at work, which is very specific and important for these industries. The representatives of the pharmaceutical industry register a positive impact in almost all areas.

It is noteworthy that no positive results are reported on job security and the development of industrial relations and collective bargaining.

The representatives of the social partners also point to negative effects of direct worker participation and new forms of work organisation and production systems:

- Increased labour intensity: *construction, communications;*
- Increase in the volume of work and responsibilities, but without improvement in working conditions: *construction;*
- Unfavourable working time regimes: *construction, communications;*
- Increased stress at work: *construction*
- Less collective action and solidarity: *mining industry and production of construction materials.*

In general, the negative results and consequences are registered mainly in construction (four directions) and communications (two directions). For industrial production the negative consequences are along individual directions or not indicated at all (pharmaceutical industry).

The negative aspect of reduction of collective solidarity and attitudes for industrial actions in the mining and production of construction materials industries stands out here, which to some extent confirms the fears of some unions about the controversial role of direct worker participation in management. However, the reasons for this phenomenon should be considered in a broader sense - to what extent there is a reduction in the influence of trade unions and worker solidarity (including due to the

employer interference) and to what extent this is due to improved working conditions (wages, workplace welfare, organization of work and working hours), which leads to a lack of specific reasons for industrial actions. The absence of industrial action is not always an indicator of reduced trade union influence, as trade unions can also achieve their objectives through dialogue and negotiation, which are well developed for these sectors in particular.

In general, the positive impact of direct worker participation both on enterprises and on I on labour, can be assessed as predominant.

III. Analysis of the situation in enterprises (case-studies)

For the project purposes, two enterprises have been selected, one from the industrial sector (pharmaceutical industry) and one from the services sector (telecommunications). Data on some other enterprises are also used within the summaries.

1. Sopharma - pharmaceutical industry

1.1. Enterprise profile

Sopharma is an old enterprise, founded in 1933. In the period 1946-2000 it existed as a state enterprise under other names. In 2000 it was privatized by a Bulgarian holding and began to develop as a modern company. In 2004 it obtained GMP certification and in 2005 - a GDP certificate.

Currently Sopharma is part of a group of seven enterprises owned by a group of Bulgarian investors. It sells its shares on the Bulgarian Stock Exchange, which is why the governing bodies have agreed the company to join the Code of Good Corporate Governance, which has been adopted by the Bulgarian Stock Exchange. The company has been preparing non-financial reports for more than ten years. In addition, Sopharma is also registered on the Warsaw Stock Exchange in Poland.

The company has its own corporate social responsibility policy, which includes actions concerning staff, environment and society.

The company's headquarters are in Sofia, where it has a large production division. It also has production divisions in Kazanlak and in the region of Lovech. The company is a member of the Bulgarian Generic Pharmaceutical Association, which is part of the Confederation of Employers and Industrialists in Bulgaria (CEIB).

The company employs 1927 workers and employees.

1. 2. Digitalization and effects in the enterprise

Technical and technological innovations have been introduced at Sopharma over the last 15 years, including:

- Automation of production;
- Use of electronic communications;
- Intranet connections;
- New software.

No new production system has been introduced in recent years, but new forms of work organisation are used, including teamwork and job rotation.

As a result of the technical and technological innovations, as well as the new forms of work organisation, there have been changes, which include optimization in employment and especially changes in occupational safety and health regulations.

According to the human resources manager, a good working environment is created for the sustainability in the physical and mental health of employees. This is due to the fact that the company is "stable, with a long history, sustainable business and a vision for future development that gives security to employees". Another aspect is the improvement of

workplace relations between individual employees and between employees and managers. No serious conflicts based on compliance with rules and values have been recorded among workers in recent years.

1. 3. Industrial relations and worker representation

There are trade unions in the company - an organisation that is part of the National Federation of Labour (NFL) "Chemistry and Industry" with the Confederation of Independent Trade Unions in Bulgaria (CITUB) and an organization that is part of the Federation of the Chemical and Pharmaceutical Industry with the Confederation of Labour "Podkrepa". Trade union density is generally lower than average -18%.

Consultations between the management team and the trade union organisations as well as collective bargaining take place in the enterprise. As there is no branch CLA, only the CLA at the company level operates in the enterprise. There is also an elected Working Conditions Committee which performs its functions.

Various forms of direct communication with employees are widely used in the enterprise, including digital ones: bulletin boards, occupational safety and health briefings, senior and middle management briefings, electronic communications (e-mails), internal electronic communications - Intranet, etc. Trade union channels are also used. Through these communications employees are informed about all important issues concerning the activity of the enterprise: production and sales, financial and economic situation, business development plans, organizational and structural changes, etc.

However, there are no policies and not new forms of direct worker participation in management in the enterprise. Some traditional forms like meetings with supervisors and middle managers, pre-shift meetings, H&S briefings, quality circles etc. have existed for long time.

1.4. Impact of the pandemic on technology, work organisation, working conditions, industrial relations

As a consequence of the COVID-19 pandemic, teleworking is being used in the enterprise for administrative and technical staff. The organization of work has also been changed so that there was no crowding. However, a shortage of people was felt at a certain period because of the large number of sick people.

In addition, there has been an increase in the use of electronic communications, including communications via mobile phones, e-mail, videoconferencing and meetings.

According to the managers, the most important measure in relation to the pandemic is the prevention of possible contamination in the workplace, as it is not possible for a large number of staff to work remotely. The opinion of the trade union representatives is similar. In this context, the role of the company's Working Conditions Committee is growing, especially in respect to implementing preventive measures and monitoring compliance with measures.

According to managers and trade unionists, the pandemic could accelerate the wider application and improvement of ICT in workplace communications and work digitalization. In addition, they expect that forms of direct worker participation based on the use of teamwork will begin to be used in the future.

2. BTC - Vivacom

2.1. Company profile

BTC-Vivacom is the main telecommunications operator in Bulgaria, which also offers fixed and mobile telecommunication services, Internet services and cable television.

BTC has been in existence since 1879 and until 2004 was a state-owned telecommunications operator providing mainly fixed-line telecommunications services. In 2004 it was privatized by the Advent Investment Fund, through its company Vivaventures.

In 2005, the company obtained a mobile telecommunications services license. During 2004 -2020 the ownership and management of the company changed several times, including for a certain period of time it was owned by the Icelandic investor Tor Bjorghorlfsson. In 2011-2013 the infrastructure (telecommunication networks) were outsourced to the French company Alcatel, but after 2013 they were returned to the main owner, which was then a Bulgarian company. Currently the main share is owned by the company United Group.

BTC operates throughout the country, with headquarters in Sofia. It is a member of CEIB (directly). The company has a policy of corporate social responsibility. The total number of employees in 2021 is 5200 people (redundancies have been made since the privatisation).

2.2. Consequences of digitalisation and other new technologies for the enterprise.

A number of technical and technological innovations have been introduced at BTC over the last 15 years, including.

- Automation of services;
- Use of electronic communications;
- New computers;
- Intranet connections;
- Electronic platforms/algorithms;
- New software.

No new system of service organisation has been used in recent years. At the same time, according to the trade unions there have been innovations in the workplace. In addition, new forms of work organisation have been introduced, including teamwork and enriching the content of work. New forms of personnel administration have been introduced: elimination of paper documents and use of on-line self-service (electronic applications, orders, etc.).

As a result of technological and organisational innovations, changes have taken place, including:

- Changes in employment - reduction of staff numbers but improvement of professional and qualification staff, as well as changes in the age structure, with a trend towards 'rejuvenation';
- Changes in the qualification and skills requirements of the workforce;
- Changes in occupational safety and health rules;
- Changes in the organization of working time.

In the surveys conducted, managers express the opinion that a good working environment is created for the physical and mental health sustainability of employees. Indicators of this are the decrease in the relative share of employee turnover, an increase in the relative share of engaged employees, as well as an increase in the number of candidates to whom their relatives and close friends working in the company have recommended it as a good place to work.

At the same time, according to the trade union representatives, the work environment is not satisfactory enough - there is an increase in the stress at work. The trade unions constantly report to the company's governing bodies about the problems in this regard which has led to a decision by the company to provide professional psychological counselling to willing employees, sports cards, spa vouchers, etc.

Furthermore, the work environment implies good relations between individual employees and trust between employees and managers. According to HRM representatives in the company, more than 500 trained mentors introduce new colleagues to the job and help current ones improve their performance. About 50 professionals conduct internal pro bono training for colleagues to build on their technical knowledge to further understand the company's business and apply a more comprehensive approach to operations. By sharing valuable experiences with each other, they seek ideas and new approaches to achieve even greater efficiency in the implementation of common projects, expanding their perception of team and team goal at the company level, not just at the level of the department or directorate in which they work. There are teams in which employees working together for more than 10-20 years have created relationships of mutual support and friendship.

In recent years, no conflicts have been registered based on violation of the company's rules and values. In the selection of employees, the extent to which the candidates profess the values of the company is examined and this criterion is also taken into account in the final decision to approve a job candidate.

According to the trade unions and managers, most of the employees have a long working experience in the company and this has led to friendly relations between colleagues not only on a professional basis but also on a family basis, i.e. they are friends not only at work but also in life. In addition, especially at the lower management levels, there is an established relationship of trust between employees and managers, as the company has a career progression system and a large number of management staff comes from the lowest levels as a result of proven professional qualities.

2.3. Industrial relations and employee representation

There are six trade unions in BTC-Vivacom, of which two are part of two trade union federations with CITUB (the Trade union Federation of Communications and the Federation of Transport Unions in Bulgaria); one is part of the Communications Federation with the CL "Podkrepa"; and three more unions that are not affiliated. However, union density is rather low - unions cover 10-12% of the workforce. The reasons for this are partly related to the excessive fragmentation of unions in the enterprise. The presence of more than one union in an enterprise is usually a precondition for competition and more active trade union action, which should attract more members. However, the presence of as many as six union organizations implies abnormal competition and demotivation of a large part of the workers to choose one of them.

The main forms of interaction between managers and employees are as follows:

- Social partnership committee;
- Consultations;
- Collective bargaining and negotiation;
- Collective labour dispute settlement procedures.

Social dialogue is relatively well developed. There is a company-wide CLA in place. There are no CLAs within the economic activity and the sector, so this is the only CLA that is used. BTC has an elected Working Conditions Committee and Information and Consultation representatives who are selected by agreement with the employer. At certain times representatives referred to in Article 7(2) of the Labour Code have also been elected, i.e. for representation and protection of wage earners (mainly those who are not members of trade unions).

Various forms of communications between workers and managers are maintained within the enterprise, with digital technology gradually

coming into use for communications. Among the most common forms used are occupational safety and health briefings, which are generally conducted before the start of the working day. Leaflets, briefings to senior and middle management and supervisors, service quality clubs and seminars, on-line communications (electronic messages, etc.) and videos are also used. The subject matter of these communications covers almost all aspects of the company's operations, including technical and technological developments, the state of services and sales, the company's financial and economic situation, organisational and structural changes, business development plans, and employment and staff training trends, as well as benefits and bonus schemes.

Trade union channels (meetings, intra-union communications, etc.) are also used to inform workers, mainly about the main aspects of work and employment.

At the same time, the company does not yet have a policy of its own to promote direct employee participation in management and there is no mention of the use of new forms. The exception are forms of direct communications, which are however mainly informative. Consultations take place mainly through trade union channels, but these mainly concern trade union members. Insofar as direct participation is assumed to exist (mainly through trade union channels), it has a mainly supportive and complementary role in management. However, according to trade union representatives this system of participation through trade union channels has led to improvements in work organisation, working conditions, health and safety and working time.

2.4. Impact of the pandemic on technology, work organisation, working conditions and industrial relations

According to the trade union representatives, as a result of the pandemic, frontline workers have become more cautious when dealing with customers, work schedules have changed, part-time and on-call hours have been introduced, working from home, etc.

Remote or telework work has been in use at BTC-Vivacom for several years, and such a clause is also included in the collective agreement. A large number of the staff is entitled to up to 5 working days per month of telework, except for those for whom this is not possible due to the nature of the work. The pandemic creates conditions for extending the use of telework to more working days, according to the situation and the nature of the work. At the time of the survey, 40% of the company's employees were teleworking for extended periods. The reason for not covering all is the nature of a significant proportion of the jobs and the fact that the enterprise offers a core service.

In addition, the pandemic also contributed to: an increase in the use of electronic communications; an increase in the use of intranets – the internal on-line information network; an increase in the use of mobile telephones; the use of instant messaging- and e-mail, as well as videoconferencing and meetings. Almost all meetings, selection procedures and training activities are conducted on-line.

According to trade union representatives, the use of social networks for exchanging views on working conditions, work organisation, etc. is also expanding.

The surveyed partners share their views on the most important measures that should be used to overcome possible negative consequences of the pandemic. According to the managers, these are measures to prevent possible contamination of workplaces, the use of "smart work", as well as

taking advantage of short-term financial support schemes in order to avoid redundancies.

According to trade union representatives, the most important measures are the prevention of possible contamination, the use of short-term financial assistance schemes to avoid redundancies and the dissemination of information on prevention and on the benefits of vaccination against COVID. Unions in the enterprise play an essential role in preventive measures against the spread of COVID by informing employees about the measures, promoting vaccination, etc. In addition, they insist in front of managers that vaccinated employees work with priority with clients.

According to the social partners in the company, the role of the Working Conditions Committee/Groups is growing. They disseminate information on prevention against contamination as well as on vaccination and on the implementation of prevention measures; they also conduct emergency briefings, etc.

According to those surveyed future developments appear to be that the effects of the pandemic are leading to an expansion of the use of information and communication technologies in employee communications and further digitisation of work.

3. General and specific aspects for the two companies

In general, both companies have a process of digitisation, but not sufficiently advanced (for BTC-Vivacom logically the progress is more serious). The use of electronic communications and information technology is expanding, and the pandemic has given impetus to their further development in the context of reducing personal contacts and protecting workers from contamination. Teleworking is also beginning to be used:

- In Vivacom a start has already been made, despite the pandemic, and the pandemic has given impetus to expansion.
- In Sopharma telework is being used because of the pandemic but more limited because of the nature of production and work.

Social dialogue and worker representation exist in both companies, despite the lack of union density. At BTC-Vivacom, the dialogue is more developed; there are regular collective bargaining processes and CLAs with sufficiently broad coverage and diverse subject matter in content. Information and consultation representation is also present and extensive at BTC-Vivacom, while at Sopharma there is only a Working Conditions Committee.

It is noteworthy that in both companies (in contrast to the situations studied in the DIRECT project carried out in 2017-2018) there are no concrete practices of direct worker participation in management, although social dialogue and information and consultation are accepted as a practice and team organisation of work and other new forms are also applied. A number of forms of direct communication with workers are used, such as meetings, notice boards, video links, electronic communications, etc. However, actual direct participation - strengthening the autonomy of individual workers and teams, is not recorded in the study in both companies.

Both companies have not used new production systems and/or service organisation systems, which is probably also a prerequisite for the lack of real forms of direct worker participation in management. However, workplace innovations and improvements in work organisation have been used.

Still, Sopharma has stated its intention to use direct worker participation in the future as a result of further digitalisation and for overcoming the effects of the pandemic.

4. Some more general trends

The comparisons of the results for the industry, specifically for the pharmaceutical industry, show that within this industry direct worker participation in management is used, at least according to the representatives of the employers' organization. Data are cited for several MNC divisions (TEVA - Dupnitsa and Troyan) and other companies - Danson-Radomir, Antibiotic-Razgrad, Ecofarm, and Sopharma. However, the analysis of the situation in Sopharma shows that direct worker participation is manifested mainly in the use of direct communications with employees, as well as new forms of work organization such as teamwork.

For telecommunications and communications in general, there is no branch level information, as the research team does not have data from an employers' organization. Furthermore, social dialogue in this sector is only conducted at the company level - in the case of BTC-Vivacom. There are no trade unions in the other companies and it is difficult to establish what forms of representation they use and whether there is direct participation in management.

Comparisons with data from other studies conducted in 2020-2021 (for example results from a study in MNC divisions in Bulgaria³⁵), show that technical and technological innovations have taken place in most of the MNC divisions in Bulgaria over the last 5-6 years and for most of them -

³⁵ The data are from a study of MNC divisions in Bulgaria (2020-2021) conducted within the project *"Improving the Adaptability of Employees and Strengthening Collective Bargaining through Joint Action of Social Partners at National, Sectoral and Branch Level"*, implemented by CITUB in partnership with BICA, BIA and KRIB and funded under the Human Resources Operational Programme.

since the beginning of the acquisition of ownership by multinational companies. In many of the divisions a process of digitization and digitalization is underway, although the use of artificial intelligence is still limited. In most divisions, digitalization has had a positive impact on labour efficiency and productivity, as well as on the competitiveness of enterprises. There have been improvements in occupational safety and health, work organization and training of workers. In some companies, there has been a decline in employment, mainly due to the dismissal of low-skilled staff, but for most of the surveyed enterprises there have been either no significant changes in employment or even employment growth, especially in the automotive sector.

In some divisions new production systems have been implemented - lean, total quality management, etc., and in most of them new forms of work organization, including teamwork, rotation, on-the-job learning, etc. have been introduced.

The pandemic has had an impact on the organisation of work in most of the enterprises in this group. Where possible, remote work has been introduced, schedules have been changed, crowding avoided, etc.

Although there is good social dialogue and I&C systems in most of the MNC divisions surveyed in Bulgaria, they do not record well-developed practices of direct worker participation in management. In some of them, proposals are submitted through digital platforms or by email, while in others more traditional methods such as suggestion boxes are used. In companies such as Witte Automotive (automotive) and Energo-Pro (production and supply of electricity), proposals are presented at an "Open Day" in direct meetings with managers.

In some of the enterprises of this group bonus schemes are also applied to encourage the proposals (Agropolychim - Devnya, chemical industry,

Mondelez (food industry) - Kaisen strategy, Veolia Water/Sofiyska voda (water and sewerage services) - IDEO system, etc. Exceptions are the enterprises already covered by the DIRECT survey (2017-2018) - Coca-Cola, Carlsberg and to some extent some other divisions of the brewing industry where modern forms of work organisation are applied.

Main conclusions and perspectives

1. The survey includes sectors, where both advancing of digitalisation and implementing of forms of direct participation could be observed. There are some differences for the various sectors-in some of them the digitalisation is more advanced. In most of them also new production systems and new forms of work organisation are implemented.

2. For most of the sectors and for the selected companies, positive impact of the digitalisation and direct workers participation on the enterprise activity was indicated. For some cases and dimensions, some negative impact like increase of work intensity, of occupational stress etc. are mentioned, mainly caused by the digitalisation, but sometimes by the implementing direct participation as well : these is visible by the two case-studies (Sofarma and Vivacom).

3. However, there are not enough evidences, that the two trends are strongly related to each In both companies there is digitalisation process and also new forms of work organisation are implemented; there is advanced process of use of electronic communications, especially in Vivacom. There are trade unions and industrial relations in both of the companies. However, the direct participation consists only from several traditional forms, rather concerned to providing information (rarely consultations): meetings with supervisors and middle managers; occupational H&S briefings; pre-shift meetings; quality circle clubs etc. Nevertheless, in Sofarama there are some attitudes (rather managerial)

to advance the implementation of direct participation in the future. In Vivacom both trade union representatives and managers are persuaded that the direct participation is useful.

4. The digitalisation and implementation of other new technologies is not always supported by the implementing of new production systems and work organisation and forms of direct participation. The implementing of direct participation is much more dependent by the managerial views and approach; it is also related to the new forms of work organisation.

5. New forms of work organisation and the direct workers' participation are tied to innovative technical and technological solutions, but can also be applied to more traditional technical and technological processes. These concern a team or group organisation of work or an individual work organisation that requires a high degree of autonomy for individual workers and group of workers as well;

6. In cases of use of new forms of work organisation and forms of direct participation both in the companies with new technologies and with traditional equipment and technology some new issues of labour could appear. Some positive results like increase of productivity and wages, improvement of motivation for work and work organisations etc. could be observed. However, some problems like increasing of work intensity, increasing of occupational stress, redundancies and sometimes even restriction of the work-place rights could appear as well.

EXPANDING AND IMPROVING WORKPLACE DEMOCRACY AS A PREREQUISITE FOR HUMANISING LABOUR AND THE WORK ENVIRONMENT – DIRECT II

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