

SUMMARIES OF PUBLICATIONS

of Assoc. Prof. Dr. Vasil Kirov, submitted for participation in the competition for the academic position of Professor in Sociology ("Digital Transformation and the Future of Work"), for the needs of the section "Knowledge Society: Education, Science and Innovation" of the IFS-BAS - Sofia, promulgated in the State Gazette, issue 57 of 22.VII.2022.

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Monograph:

Киров, В. (2022) *Дигиталната трансформация и бъдещето на труда.*

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(Kiriov, V. (2022) *Digital transformation and the future of work. Global trends. Local implications.* Sofia. University Press "St. Kliment Ohridski.)

What is the digital transformation? And is it a technological revolution or not? And what exactly is a technological revolution? Today in the scientific literature, opinions are divided. Digital transformation or digitalisation is seen either as a "revolutionary process" transforming societies or as an "evolutionary" process, a process of gradual change. Although this debate is still open, both views bring certain ideas on how change should be analysed and what should be done to adapt societies, companies and individuals to it. Digital transformation or digitalisation is the application or increased use of digital technologies by organisations, industries, regions and countries. "The 'digital revolution', often referred to as the Fourth Industrial Revolution, is defined as "a general acceleration in the pace of technical change in the economy, driven by a massive expansion of our capacity to store, process and exchange information using electronic devices" (Eurofound, 2018:1). Transforming the social organisation of economic activity, this digitalisation impacts on workplaces, but also beyond them, for example on systems for skills acquisition, tax collection and social service delivery.

In fact, this process is based on so-called micro-processing, whose introduction and diffusion in the 1970s was declared by some researchers at the time as the Third Industrial Revolution (Jenkins & Sherman, 1979). And while digital transformation is not new per se, what is new in the last few years is the speed and scope of technological change and its transformative potential (Meil & Kirov, 2017; Katz et al., 2014). This general acceleration in the pace of technological change in the economy is driven by a huge expansion in the capacity to store, process and communicate information using electronic devices. New developments in robotics (cobots), the Internet of Things, 3D printing, but also in big data, machine learning and artificial intelligence, as well as possible combinations of all these technologies, are considered powerful drivers for changes in living, working and mobility conditions.

However, a review of the extensive literature on the future of work shows not only that there is no agreement on the nature of the changes, but more than that: it is clear that there is an urgent need to improve the evidence base on the actual effects of digitalization on work and employment (Hunt et al., 2019), with a particular weakness being the paucity of relevant data (OECD, 2018). In this sense, the aim of this monograph is to fill this gap with respect to Bulgaria.

The basic premise of our analysis, in the spirit of our work on the BEYOND 4.0 project, is that technology, including digital technology, is not deterministic but socially negotiated by key actors at different levels: firms, sectors, region, national and EU. This process of digital transformation involves two main manifestations or organisational models: Industry 4.0 (Industrie 4.0) and platformisation. Their emergence and their initial disruptive effects are fundamental to understanding the impact of digital transformation. To a large extent, however, the implications of these two manifestations of digital transformation are still hypothetical and/or speculative. They are mostly based on econometric modelling and prescribed values (Dunlop, 2016). For example, contrary to the dominant discourse of huge job losses, just before the start of the Covid-19 pandemic, many labour markets in Europe were reporting record employment levels. Moreover, the standard employment relationship with permanent full-time work for a single employer is still dominant, although non-standard employment involving part-time, temporary or self-employment has gradually increased (Eurofound, 2018).

In this regard, it is important not only to examine and analyse processes at the global level, but also to clarify what is happening in the national context. This is the aim of this book. The proposed analysis also contains certain limitations. First of all, it is the limitation related to the

research methods. The illustrations of what is happening in Bulgaria are based on individual cases - for example, the study of an entrepreneurial ecosystem, of an occupation, of a certain category of employees, etc., and a variety of methods have been used in these studies. On the one hand, qualitative methods, enabling us to analyse the processes we are looking at in depth and to highlight trends and nuances. On the other hand, quantitative research that allows the formulation of more definitive generalizations and representativeness of results.

The book includes an introduction, three chapters and a conclusion. The first chapter is devoted to Industry 4.0. It is prepared on the basis of two case studies. The first example is about the ICT entrepreneurial ecosystem in Sofia. The other is an illustration based on a study of the expected impact of artificial intelligence on creative professions. The second chapter is devoted to the platform economy. It starts with an overview of online platforms operating in Bulgaria or engaging individuals from the country. It then discusses an example of platform work for highly skilled professionals in the information and communication technology (ICT) sector. The last illustration is of caterers as an example of low-skilled labour. The third chapter examines working from home as an important element of labour development in the context of digitalisation, drawing on evidence from recent research. It concludes with an overview of certain policies and makes recommendations for stakeholders in Bulgaria.

Studies, articles and chapters in collective monographs in specialized scientific journals

1. Kornelakis A, **Kirov, V.** and Thill, P. (2022) **The digitalisation of service work: A comparative study of restructuring of the banking sector in the United Kingdom and Luxembourg.** *European Journal of Industrial Relations*. 28 (3): 253-272, First Published January 18, 2022.

<https://journals.sagepub.com/doi/10.1177/09596801211056829>

(ISSN: 0959-6801), (Q1)

The article compares the process of digitalisation and outcomes from work restructuring in two banks from the United Kingdom and Luxembourg. The banking sectors in both countries have been challenged by digitalisation pressures such as online and mobile banking, pressures from ‘Fintech’ banks, and the automation of back-office operations. Yet, the adjustment paths in the two countries differed. In Luxembourg, there is an adjustment via limited lay-offs, and increased training and reskilling; however, in the United Kingdom, the main outcomes revolve around branch downsizing and offshoring of employment. These outcomes are explained by differences in institutional supports for collective voice institutions, as well as the role of the state. The findings demonstrate that the embedded employment relations’ institutions and actors have shaped distinct paths of adjustment to digitalisation; and show how the impact of technology on work is neither deterministic nor unidirectional.

2. **Kirov, V.**; Malamin, B. (2022) *Are Translators Afraid of Artificial Intelligence?*. *Societies*, 12, 70. <https://doi.org/10.3390/soc12020070>
(ISSN: 2075-4698), (Q2)

Artificial intelligence (AI) is a leading technology in the digital transformation. AI is expected to cause job losses in general, initially in professions associated with routine activities, and subsequently in the field of creative professions. The present article analysed the results of the authors' own empirical sociological survey of the attitude of Bulgarian translators towards AI, and the ways in which it will change their profession. Most of them perceive artificial intelligence and automatization as threats to the profession. According to them, digital technologies and AI will modify the profession by relieving human translators of the routine, technical part of the job. Hence, translators will predominantly edit machine-translated texts, and teach artificial intelligence to perform machine translation. The conclusion of the analysis demonstrates that, in the case of Bulgarian translators, such pessimistic scenarios about mass jobs destruction are not justified. In addition, expectations of a deterioration in quality of work as a result of digitalization in the near future are not justified in the case of the translating profession. The present survey results serve as a basis for further research about the impact of artificial intelligence on other creative professions.

3. **Kirov, V., Andjelkovic, B., Jakobi, T. and Kosheva, M. (2022) Is there decent work in the online food delivery business? Case studies of Bulgaria and Serbia.**
Sociological Problems, 54 (1) 297-315.
(ISSN: 0324-1572)

Work being conducted via online platforms has developed extremely rapidly in recent years and is one of the most important factors in the digital transformation of employment. While platform work in Western Europe has been a subject of increasing research interest during the last five years, contributions about Central and Eastern Europe are relatively scarce, especially concerning food delivery. The article demonstrates that while globally online food delivery platform work is most often associated with low quality, in the case of Bulgaria and Serbia delivery riders benefit from at least some dimensions of decent work.

4. **Kirov, V. and Yordanova, G. (2022) The representation of platform workers through Facebook groups in Bulgaria – a partially-filled void.** in Rego, R. and Costa, H. (Eds.) *The Representation of Workers in the Digital Era, 1st ed. 2022 Organizing a Heterogeneous Workforce.* Palgrave, 161-182.
(ISBN 9783031046513)

The model of employment regulation in Bulgaria has developed in the context of a weak state and the erosion of organised industrial relations. Over the past five years, it has become clear that an increasing proportion of atypical employment is the performance of various tasks through online labour platforms. The questions addressed in this chapter are whether platform workers, and atypical workers in general, are represented collectively and have a mechanism to ensure a collective voice? According to the literature, Bulgarian social partners are still mainly focused on employees with typical employment. Moreover, there are no specific organisations in Bulgaria representing platform workers. However, some forms of emerging collective action can be observed within online social media exchange forums. Our analysis examines these understudied forms of collective expression based on a case study of discussion forums and Facebook groups. The analysis reveals some possibilities for the trade union movement, as the forums studied do not have the ambition to engage in further institutionalization and formalization.

5. Focacci, C. & Kirov, V. (2021) **Regional Entrepreneurial Ecosystems: Technological Transformation, Digitalisation and the Longer Term. The Automotive and ICT Sectors in the UK and Bulgaria.** *Local Economy*. Vol. 36(1) 56–74.

(ISSN 0269-0942) (Q2)

We investigate how regional entrepreneurial ecosystems have adapted to the information revolution as a techno-economic paradigm since the 1960s. Particularly, we look at how the organisation of firms and labour has changed in the automotive and ICT sectors in, respectively, the UK and Bulgaria. Findings show that, in both countries, it was the degree of cooperation between the local enterprises, research institutions and the government that enabled successful innovation in the regional clusters of the West Midlands and Sofia. The resulting ecosystems allowed, on the one hand, the already mature automotive sector in the UK to survive and, on the other hand, the newly developed ICT sector to be installed successfully in Bulgaria.

6. Йорданова, Г. и Киров, В. (2020) **Ролята на работата през онлайн платформи за баланса между работа и родителство в сектора на ИКТ в България.**

Социологически проблеми, 52(1): 277 - 300.

(ISSN:0324-1572)

(Kirov, V., & Yordanova, G. (2020). The role of online platforms in the work–parenthood balance: The ICT sector in Bulgaria. *Sociol. Probl*, 52, 277-300)

This article analyses how self-employed people’s work via online labour platforms contributes to a better balance between work and parenthood in the Information and Communication Technology (ICT) sector in Bulgaria. The attitudes of over one hundred self-employed persons have been analysed. The research goals were achieved through the authors’ sociological survey, using quantitative (web-based questionnaire) and qualitative methods (in-depth interviews). The research results showed that working through online platforms is conducive to respondents’ better work–parenthood balance. In this sense, the perceived vulnerability of online platform work, which is well-represented in the literature, is nuanced - at least with respect to highly skilled and highly paid self-employed workers. Its study will further contribute to a better understanding of the quality of work in the new economy.

7. **Киров, В.** и Маламин, Б. (2020) **Ще отнеме ли изкуственият интелект работата на преводачите?**. *Социологически проблеми*, 52 (2): 511-533. – (ISSN:0324-1572)

Artificial intelligence (AI) is a leading technology of digital transformation. AI is expected to cause jobs loss in general – initially in professions associated with routine activities and subsequently in the field of creative professions as well. Present article analyzes the results of own empirical sociological survey of Bulgarian translators’ attitude towards AI and the ways it’s going to change their profession. Most of them perceive artificial intelligence and automatization as threats to the profession. According to them digital technologies and AI will modify the profession relieving the routine technical part of the job. Hence translators will predominantly edit machine-translated texts and teach artificial intelligence to do machine translation. Analysis’ conclusion demonstrates that in the case of Bulgarian translators the pessimistic scenarios (Frey and Osborne, 2017) about mass jobs destruction are not justified. Expectations of labour quality deterioration as a result of digitalization (Holtgrewe, 2014) are not justified as well. Present survey results can serve as a basis for further research of artificial intelligence impact on other creative professions.

8. Yordanova, G. and **Kirov, V.** (2020) **Virtual work in the ICT sector in Bulgaria: what impact on work life balance?**. *Revista Inclusiones* Vol: No 7 (2020): 424-446. (ISSN: 0719-4706)

The article explores the role of virtual work in improving work-life balance (WLB) within the ICT sector in Bulgaria. In the context of inadequate public policies, the attitudes of those working in the ICT sector (employees and freelancers) are analysed along with the human resources management policies of companies. The research objectives were achieved through quantitative survey (webbased survey) and qualitative methods (interviews with managers, employees, freelancers). Three specific hypotheses were tested to investigate the relationships linking gender, duration of virtual work, and age of children (defined as factor variables) to parents' satisfaction with their WLB (resultant variable). The research findings reveal that: virtual work is practised mainly by individual choice, company policies are based on individual arrangements with employees rather than formalised policies, and those employees engaged in virtual work experiences report better satisfaction regarding their WLB. Recommendations for company policies have been formulated on the basis of the research findings.

9. Thomas, A., **Kirov, V.**, & Thill, P. (2019). **Luxembourg: an instance of eroding stability?** In T. Müller, K. Vandaele, & J. Waddington (Eds.), *Collective bargaining in Europe: towards an endgame* (Vol. I, II, III and IV, pp. 403-421).. ETUI (European Trade Union Institute). <https://www.etui.org/Publications2/Books/Collective-bargaining-in-Europe-towards-an-endgame.-Volume-I-II-III-and-IV>
(ISBN 978-2-87452-514-8)

Luxembourg is a small Western European country that can be classified as belonging to the group of coordinated market economies, following the theory of varieties of capitalism that distinguishes between liberal market economies such as the US and the UK and coordinated market economies where the market is more highly regulated such as Germany and other Western European countries (Hall and Soskice 2001). The employment relations system in Luxembourg has also been described as continental or neo-corporatist with some statist elements, as the coordinating role of government remains significant with strong support at all bargaining levels (Vollaard et al. 2015). Luxembourg has a long history of workplace representation and trade unions play a key role in collective bargaining. They extend their influence over neocorporate political decision-making, which gives unions political legitimacy and social weight (Allegrezza et al. 2003; Thill and Thomas 2011). This chapter presents the scope of collective bargaining, including key actors and mechanisms for expanding collective bargaining, as well as the levels of bargaining and the challenges to this process in the face of economic and social change.

10. Kirov, V. & Thill, P. (2018) **The Impact of the Crisis and Restructuring on Employment Relations in the Banking Sector in Europe: the Cases of France, Luxembourg and Romania**, *European Journal of Industrial Relations* (EJIR), 24 (3): 297-313.
(ISSN: 0959-6801), Q1

This article discusses the dynamics of collective bargaining in the management of restructuring, drawing on the example of the banking sector in France, Luxembourg and Romania. We show that the organized decentralization of the corporatist or statist models of France and Luxembourg helped sustain employment relations systems and cushion crisis effects. Bargaining outcomes included internal mobility and training. In Romania, by contrast, disorganized decentralization meant that solutions were left to the company level and to market forces.

11. Йорданова, Г. и **Киров, В.** (2018) **Предизвикателствата пред работата от разстояние: случаят на българските жени в сектора на информационните и комуникационни технологии**, в *Неравенства и социална (дез)интеграция: в търсене на заедност*, съставители П. Бояджиева, М. Канушев, М. и М.Й. Иванов. София: Изток-Запад. 2018. 347-362.
(ISBN: 978-619-01-0188-8)

The study analyses the role of virtual work in achieving work-life balance in the information and communication technology (ICT) sector in Bulgaria. Telecommuting, mediated by new information and communication technologies, is considered a key factor in achieving a good work-life balance. But on the other hand, virtual work leads to an increase in work-family conflict. To demonstrate the ambivalent effect of teleworking, we analyse the attitudes and practices of ICT workers (employed and self-employed). The research objectives were achieved through original sociological research with quantitative (web-based survey) and qualitative (in-depth and biographical interviews with managers and workers as employed or self-employed) methods. Research findings confirmed the existence of work-family balance with high levels of work-family conflict recorded.

12. Meil, P. and **Kirov, V.** (2017) **Introduction: The Policy Implications of Virtual Work** in Meil, P. and Kirov, V. (Eds.) (2017): *Policy Implications of Virtual Work*. Basingstoke: Palgrave, pp. 3 – 28.
(ISBN: 978-3-319-52057-5)

The reality of digital labour is proving very controversial, especially for those trying to regulate it. The development of new technologies gives rise to almost utopian visions of the possibilities of participation, democratization, innovation and sharing. These developments also lead policy makers to identify gaps in regulation. Moreover, they can also lead to instances of de-professionalisation, market concentration, new forms of surveillance and threats to intellectual property that pose a real threat to workers and citizens if ways are not found to regulate digital spaces without destroying their potential. This chapter provides an overview of developments in the digital environment and the debates surrounding these developments. It also outlines the contributions of the other chapters of the book made within these debates, outlining a number of challenges in relation to virtual labour as a starting point for navigating potential policy and regulatory alternatives.

13. Kirov, V. (2017) **Digitalization of Public Services in Europe: Policy Challenges for the European Trade Union Movement** in Meil, P. and Kirov, V. (Eds.) (2017): *Policy Implications of Virtual Work*. Basingstoke: Palgrave, pp. 251 – 272. (ISBN: 978-3-319-52057-5)

This chapter examines the process of digitisation of the public sector and public services in Europe and analyses its impact on the labour and employment sectors. It discusses the emerging interest and involvement of public service trade unions in Europe in the digitisation debate. The argument is that digitalisation, which in the literature has been viewed mainly from a 'technical' perspective, is beginning to increasingly challenge stakeholders in general and trade unions in particular in terms of the implications for labour and employment. However, it is a process that builds on still limited concrete knowledge and ideas to deal with these consequences. Even if the political debates in 2015-2016 within European trade union movements have been intense, they are still too general. Recommendations for trade union strategies in the context of the digital transformation have been formulated - for example, with regard to new skills, the transformation of jobs and the associated restructuring, and the need for better coordination at European level.

14. Drahokoupil, J., Kirov, V., Muntean, A., & Radu, E. (2017) **Chinese investment in Romania and Bulgaria** in Drahokoupil, J. (Ed.) *Chinese investment in Europe: corporate strategies and labour relations*, Brussels: ETUI, pp. 141 – 154.
(ISBN 978-2-87452-454-7)

This chapter presents specific examples of Chinese investment in Romania and Bulgaria. The cases can be classified by distinguishing between market and resource-seeking investment strategies. A conclusion is formulated about the challenges in the cases of "high road" and "low road" type of development investments. The inflow of Chinese investment into Romania and Bulgaria has been modest, which contrasts somewhat with expectations that these countries could serve as a gateway for Chinese companies to Europe. The two types of companies that have been able to take advantage of the cheap environment and access to European markets have been identified.

15. Rego, R., Sprenger, W., **Kirov, V.**, Tomson, G., di Nunzio, D. (2016) **The use of new ICTs in trade union protest in five European countries**, *Transfer: European Review of Labour and Research*, 22(3), 315-329.
(ISSN: 1024-2589), Q1

Despite the interest in the use of new information and communication technologies (ICTs) by trade unions, little is known about how new ICTs have changed trade union protest. In a period of austerity, in which new groups – including labour-related ones – have shown impressive mobilization using social media, we focus on a cross-country approach, looking at the impact of trade union strikes and protest in the public sector. Our findings show that new ICTs are being used at all stages of strike action and union protests in general, but do not allow us to assert that unions have changed the way they act in a fundamental way.

16. **Kirov, V., Ramioul, M. (2015) Quality of work in the cleaning industry: a complex picture based on sectoral regulation and customer-driven conditions**, in M. Hauptmeier and M. Vidal (eds), *The Comparative Political Economy of Work and Employment Relations*, London, Palgrave, pp. 290 – 311.
(ISBN: 978-1137322272)

Europe's cleaning sector has been experiencing a continuous job growth. Work in this sector is associated with high risks due to precarious working conditions, poor quality of work and limited opportunities for adequate representation at company level. In this chapter we combine different theoretical perspectives to analyse this complex configuration in more depth, in particular with studies of sectoral social dialogue in three European countries, Austria, Belgium and Norway, and with case studies in a number of large multinational service providers. It is demonstrated that sectoral regulation does not fully prevent the deterioration of working conditions due to the persistent use of part-time work, fragmented working hours and low pay. At the same time, the customer of the service has a key role in determining the conditions under which work is carried out and this must be taken into account in sectoral collective bargaining.

17. **Kirov, V., Thill, P. (2015), *Employment relations and restructuring management in the banking sector in Luxembourg*, *Warsaw Forum of Economic Sociology (WFES)*, Vol 6, Number 1 (11): 75 – 100.**
(ISSN 2081-9633)

This article discusses how restructuring during the crisis has affected employment relations in the banking sector in Luxembourg. The crisis has reinforced the impact of a series of exogenous factors influencing Luxembourg's banking sector and its continental employment relations system. These include the automatic exchange of information, rapidly-evolving European and international regulation and the resulting stronger compliance of banks, the mobilisation of external expertise by social partners, as well as stronger skills and professional requirements. It is argued that although these factors challenge the consensus-based and neo-corporatist employment relations framework, coordinated decentralization with strong government involvement in tripartite bargaining arenas has meant that the functioning of the employment relations system has been maintained. Collective bargaining has contributed to a socially-responsible restructuring in the banking sector through the anticipation and management by consenting to legally-based labour agreements and certified training for dismissed employees, as well as impact management through implementing transition support instruments.

18. **Kirov, V. (2012) Restructuring of Global Value Chains in the New Member States Economies - the impact on flexibility**, in Petraki, G., (ed.) (2012), *Global Change in Work Organisation*, Gutenberg, Athens, pp. 135-153.
(ISBN 978-960-01-1450-8) (in Greek)

Employment in former socialist countries was considered to be guaranteed, full-time and based on a standard employment contract. Flexibility practices were relatively unknown and unused in Central and Eastern Europe. Since the fall of the Berlin Wall, the impact of political and economic changes on employment has been very important. Employment was no longer guaranteed and a variety of employment relationships as well as informal economy practices have been partially replacing typical employment. One of the important drivers of change in employment over the last 20 years has been globalisation. Privatisation has allowed important foreign investors to enter the region. Together with so-called greenfield investments, foreign companies are acquiring a significant part of the Central and Eastern European economies. The entry into global value chains (GVCs) of many small and medium-sized CEE companies in the 1990s and 2000s was a third important mechanism for integration into the global economy. This paper outlines the main findings on the impact of GVC restructuring on employment in transition economies with a focus on flexibility practices. It draws on research work carried out within the European project Work Organisation and Restructuring in the Knowledge Society (WORKS).