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## Working time and digital transition: a complex and ambiguous relationship

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### Abstract:

The digital transition underway combines different types of technologies: digital, physical and biological technologies. These three families of technologies interact, drawing on the progress in artificial intelligence and machine learning, and creating the opportunity of digitalizing all stages of production and services systems. The increase of digital work represents a deep transformation of economy and society, posing huge challenges to companies, employees and policy makers, and therefore to social scientists. In this context, in European countries, working time regulation has become central to employment policies. The guiding principles of working time management are based on three aspects: the conventional definition of working time flexibility; the development at the public level of measures that make the reduction of working hours advantageous; and the adequacy of working time management to the whole of working life. Advances in information and communication technologies that bring high convenience to personal life are also blurring the lines of work-time and personal-time, threatening work-life balance. This situation is raising not only important legal issues, but also ethical considerations related to mandatory or unpaid overtime, and the possibility of employer subtle or explicit coercion. Additionally, the ethicality of unconventional shift work and long work-hour schedules is also at stake in issues like the gender-based inequities related to working hours, and employer's responsibilities for protecting individuals who are not employees from the indirect effects of demanding work schedules, namely affecting the work-family balance. In terms of research methods, after an assessment of the transformations underway, based on literature review and documentary analysis, we will develop a qualitative approach with semi-structured interviews, which will allow to analyse the positions of different key actors (employers' and trade union confederations) on long working hours and their effects.

**Keywords:** Digital transition; digital work; working time regulation; work-life balance; legal and ethical consequences of digitalization.

### 1. Introduction: Digital transition and the big transformation in jobs and work

It is widely accepted that new technologies play an important role in the economy and society. The so-called industry 4.0 combines different types of technologies (digital, physical and biological) (Schwab, 2016) and creates opportunity of digitalization of all stages of production and services systems. It unfolds in digital (IoT, block chain, digital platforms), physical (additive manufacturing, advanced robotics and autonomous vehicles) and biological technologies (initiated with the genome sequencing). These three families of technologies interact, resorting to the progress in artificial intelligence and machine learning. This represents a deep and unprecedented transformation of the economy and society, which poses huge challenges and pushes companies to reassess, adapt or reinvent their business models, their organization, their relationships with other companies and, most importantly, with their employees.

The major concern for social scientists and international organizations is the impact of technological solutions on employment and skills (Frey and Osborne, 2017). In fact, the deepening of automation is one of the main aspects of this process. Every single activity in the manufacture and/or services is expected to be transformed. Several reports (WEF, 2016; McKinsey, 2017), books and articles have been published addressing both the quantitative and the qualitative impact on jobs, which in fact are related. In order to preserve and or create new jobs, skills have to be formed or modified, via formal education or training. The speed and extension of this shift will obviously depend also on cost factors, mostly related with wage rates and wage level gaps relatively to other countries and regions. In a globalized world, the equation has to take into account the existence of a huge pool of workers in less developed countries, willing to be integrated in global production chains, either in conventional outsourced firms or via digital platforms. In the latter case, they are acting almost as independent workers holding a tenuous and precarious link with a distant company located in a developed country.

Even highly skilled professionals in developed countries will be affected by the digitalization of their activities, made of tasks that range from low to high potential of automation, according to parameters such as cognitive content, creativity, relationship with customers and predictability (McKinsey, 2017). Digitalization of work is

therefore a pervasive reality for workers and companies, with impact on the configuration and availability of jobs, the content of work, the relationships with the employers' entities, and the organization of the working life, which comprehends the organization of working time. The governments, the unions and the employers' associations are required to develop coordinated action to gear digital transition in a balanced way for all parts involved.

## **2. Working time regulation, telework and work-life balance**

The theme of working time is central to social research, in the sense of promoting knowledge that can influence the elaboration of socioeconomic intervention policies. Given the technological changes that have occurred in recent times, there is a certain consensus among various researchers on the need for the employment contract to adapt to new conditions in companies as a function of organizational and technological developments and new conceptions of work organization (Crompton, Gallie, and Purcell, 1996; Blanpain, 1997, Gallie, et al., 1998).

But as several studies show on the use of ICT within and outside the employer's premises tends to lead to higher levels of work intensity (Eurofound, 1997; Felstead and Jewson, 1999; Grant, Wallace and Spurgeon, 2013; OECD, 2013; OECD, 2016; Rebelo and Roxo, 2019, Eurofound, 2019). How to combine work with life is a fundamental issue for many people, an issue that policymakers, social partners, businesses and individuals are seeking to resolve. In several European countries, working time regulation has become central to employment policies because time can be a structuring element in the organization of work. Those countries have intervened through legislation in order to improve working conditions and the health and safety of workers, in line with its commitment to "more and better jobs" (Eurofound, 2018). In Portugal, one of the basic guidelines of the legislative policy, which guided the revision of the Labour Code in 2009, was precisely the question of the organization of working time. Other amendments to the Labour Code, in 2012, included changes to the overtime regime. One of the main novelties of the 2012 amendments to the Portuguese Labour Code is that the legislator expressly recognizes the existence of long working hours "exceeding 50 hours".

Teleworking has been considered the most central type of contract in the Information Society, since it can be adapted to the needs of greater use of working time, solving problems arising from the displacement of workers needed for their activity. Portugal was one of the first countries in Europe, in 2003, to introduce provisions in labour law on teleworking. The European framework agreement on telework (2002) was the main European text covering this issue. According to the current Portuguese Labour Code, the concept of telework is the work performed with legal subordination, usually outside the company and through the use of information and communication technologies.

The use of new technologies is intended to meet the new productive needs of the company, particularly in situations where teleworking is applied partially or alternately. From the employer's perspective, among the advantages pointed out to teleworking, firstly is the fact that the work can be relocated allowing to obtain competitive advantages of proximity to the customer and cost reduction. Secondly, telework is associated with work and production reorganization practices, in a movement to reduce structures and make companies more flexible (Eurofound, 2006; Eurofound, 2015). Companies seek, through a reorganization process, to reduce the surface area of their workplaces, which means less capital assets, (re)targeting more profitable investments. Thirdly, teleworking facilitates functional outsourcing in companies, allowing them to increase their productivity gains and provide products and/or services more quickly than if the work was carried out within the company, without companies having to hire additional staff (Eurofound, 2013). Teleworking implies profound behavioural change. Since employers tend to be resistant to work processes that are difficult to supervise, many companies see teleworking as a form of work granted only to "privileged persons". Secondly, because the development of teleworking requires that the temporal continuity of the information chain be effectively guaranteed and that networked communications be adapted to teleworking. For teleworkers, the benefits relate to the management of their leisure time, which can provide a better quality of life from the outset, since the contingencies and time to commuting to the workplace decrease or disappear, with positive effects on their work-life balance (ETUI, 2017; Eurofound and ILO, 2017). Thus, in teleworking one of the possible drawbacks is that of an effective "overload of working hours", the monitoring of which becomes particularly difficult. Still at the level of workers, a significant disadvantage concerns the problems resulting from isolation, loss of organizational identity, and daily overwork. Linked to this, another disadvantage concerns the degradation of teleworkers' skills, resulting from the organizational segmentation established between them and their colleagues at the level of participation in vocational training and all other promotional

opportunities offered to their colleagues. Finally, a further disadvantage is the almost inevitable overlap between the professional and private life of teleworkers (Schneider and Rosensohn, 1997).

In Portugal Covid-19 pandemic offers an opportunity to accelerate major changes. A recent ILO study on Portugal shows discretionary measures adopted in response to COVID-19 (ILO, 2020). According to this study, as in many other countries, Portugal has experienced an unprecedented social situation: people have developed new habits as workers, students, citizens and family members. Some of these transformations will be transitory, while others may persist. The generalization of teleworking is the most obvious change, experienced in very different and contrasting ways by workers and employers. But there are others. In a very short period, all Portuguese schools and universities went on-line, giving most students and teaching staff their first experience of e-learning tools (ILO, 2020).

### **3. Legal and ethical aspects of the digitalization of work**

New information and communication technologies that bring high convenience to personal life are also “blurring the lines of work-time and personal-time” (Marcum, et al., 2018, p. 73), threatening work-life balance and limiting privacy individual rights (Royackers, et al., 2018). This situation is raising important legal issues. In fact, an important part of the employees involuntarily entered into a legal regime of exemption from working hours and without being paid according to this labour framework. To prevent it from interfering in the private lives of employees, the right to disconnect has been established in some countries. Additionally, relevant ethical considerations may be raised in issues of unconventional work, carried out involuntarily by employees on a normal schedule regime, by the simple fact they are contactable by email or smartphone. Employees are apparently aware of these negative effects of technology: the large majority of participants of a study on the use of mobile information technology devices (Adisa et al, 2017) associated it to long working hours and no extra pay.

As flexible work arrangement, telework is supposed to give employees some benefits, namely the autonomy to make work-related decisions leading to positive outcomes, such as better work-life balance. In fact, there’s evidence that flexible workers (e.g., teleworkers) tend to experience higher levels of job satisfaction and organizational commitment than their office-based colleagues (Kelliher and Anderson, 2009). Paradoxically, one of the most likely results of teleworking is the *intensification of work* in an intensive way, related to the sharp increase in the number of tasks performed and/or objectives achieved as result of increased employee’s effort during the work-time, or extensively, referring to an increased amount of time spent at work (Green, 2004). Even if not imposed, intensification may be enabled by the removal of workplace distractions (interruptions of co-workers, social interactions) in working from home that makes easier for people to work harder or longer (Tietze and Musson, 2005). The use of communication technologies is linked to work intensification, faster-paced work, greater levels of interruptions, multitasking and employee’s strain and distress (Chesley, 2014).

Far from being a reciprocal exchange, in most cases, the decision to work from home involves a tacit negotiated process in which employees and managers agree to exchange intensified work for the anticipated benefits of telework. Bathini and Kandathil (2019) concluded that the narrative of reciprocity in telework may actually lead to “a discursively orchestrated negotiation that favours management” (p. 211). Often subtle, this implicit negotiation raises ethical issues that are difficult to detect, as it is not always clear to employees that the expected over-performance often requires overtime, even apparently working time management is under their control, and involves no extra-pay. To counter this tendency, it’s possible to simply argue (Bathini and Kandathil, 2019) that telework must be framed as an employee right rather than a benefit. But, since telework can sometimes involve “deep transfer of risks and responsibilities from the company and its management to the individuals at work” (Taskin and Devos, 2005, p. 18), clear and legally framed negotiation may be the actual tool to guarantee the employee’s right.

### **4. Methodology**

The main goal of this exploratory study is to understand the opinions and attitudes of Portuguese social partners on various working-time related issues in Portuguese companies. Specifically, we sought to understand the effects of working time management and teleworking. Firstly, we address, as a research dimension, the “equality at work and work-life balance”, including the importance of working-time flexibility and work-family balance; the acceptability of work after the normal period of contractual work, using new technologies; the right to disconnect and the relationship between working time, employees’ career

progression and long hours work; the corporate social responsibility support to employees concerning working-time management and the promotion of gender equality at workplace. As for the second research dimension, we focused on “digital work/telework and working time” issues, namely: teleworkers autonomy and advantages of teleworking and mixed regime (telework and face-to-face); advantages for the company and the worker in alternating teleworking and work in the office; impact of telework on work-life balance, productivity, teleworker's career, and on vocational training; the role of companies and collective bargaining in the implementation of telework policies.

Given these objectives, a qualitative approach with semi-structured interviews was adopted. Drawing on the literature review and documentary analysis, we developed a research model that includes the various dimensions of the two axes described above. Table 1 outlines the research axes and dimensions, which generate the questions applied in the interview.

**Table 1: Interview script - Analysis dimensions**

Dimensions	Issues
<p><b>I- Equality at work and work-life balance</b></p>	<ul style="list-style-type: none"> <li>• The importance of working time flexibility in business management.</li> <li>• Work-family balance in Portuguese companies.</li> <li>• Acceptability of work after the normal period of contractual work, using new technologies; the right to disconnect.</li> <li>• Relationship between working time, employees' career progression and long hours work.</li> <li>• Corporate Social Responsibility support to employees concerning working-time management.</li> <li>• Promotion of gender equality at workplace.</li> </ul>
<p><b>II- Digital work/telework and working time</b></p>	<ul style="list-style-type: none"> <li>• Teleworkers autonomy.</li> <li>• Advantages of teleworking and mixed regime (teleworking and face-to-face).</li> <li>• Differences between profiles of teleworkers and face-to-face workers.</li> <li>• Repercussions of telework on work-life balance.</li> <li>• Impact of telework on productivity.</li> <li>• Advantages for the company and the worker in alternating teleworking and work in the office.</li> <li>• Repercussions of telework in the teleworker's career.</li> <li>• Impact of teleworking on vocational training.</li> <li>• The role of companies and collective bargaining in the implementation of telework policies.</li> </ul>

The interviews were addressed to three Portuguese social partners, members of the Economic and Social Council, a constitutional body for social consultation and conciliation: two trade union confederations and one employers' confederation. The social partners included in this study gave their views on the current challenges of digital work, both in terms of working time and the spatial relocation of work, with teleworking. Each organisation has analysed flexible working options for employees during recent years in Portugal and, in particular, during the recent Covid-19 pandemic.

## 5. Results

Results are reported in a way that allows the comparison of the answers of employers and workers representatives concerning working-time issues and the increasing use of digital work. According to the applied interview guide, and considering its dimensions of analysis, it was possible to obtain the following results.

### 5.1. Equality at work and work-life balance

**Table 2: Working time flexibility and work-family balance**

Social partner	View
Employers' confederation.	Portuguese companies value the legal instruments available for the flexibility of working time and understand the importance of reconciling the professional and family life of their employees, namely due to the impact this dimension has on the reduction of absenteeism and motivation, with positive results in productivity. In the case of contact centres, individual schedules are tailored to the convenience and needs of employees.
Trade union confederation 1.	Working time is a problem that breaks down into several dimensions, each one of them with particular unfolding - although related to each other, three fundamental aspects are identified: duration, intensity and flexibility of working time. In Portugal, the typical instrument of flexible working time in the interest of the worker is flexible working hours.
Trade union confederation 2.	Reconciliation policies in most cases are used more as a marketing weapon than as management policies in the interest of workers.

**Table 3: Work after the normal period of work. Working time and career.**

Social partner	View
Employers' confederation.	The developments in teleworking, via the COVID-19 pandemic, have emphasized the right to disconnect, but many employees - as a result of the requirement of confinement - have found that they prefer to have forms of work based on sharing working time between the physical presence in the company and telework from home, including with the preponderance of telework. The right to disconnect is advisable as long as it is not confused with the obligation to disconnect. The willingness to accept requests should naturally be considered as an employee's prerogative.
Trade union confederation 1.	One of our biggest concerns is how can the Portuguese labour market, with high levels of precariousness, live with extraordinarily advanced forms of work organization. The right to disconnect is the right of workers to privacy and rest and to establish a red line between family and professional spheres. The right to disconnect, as an essential principle for the promotion of reconciliation between personal and professional life is one of the great challenges that the implementation of the telework regime will face.
Trade union confederation 2.	The right to disconnect is no more than the obligation of the employer to not require work outside the established hours. There is no "right to disconnect", what exists is an obligation on the part of the employer to respect labour rules, contractual limits and the employee's personality rights. In this sense, it considers redundant and dangerous the idea that the right to privacy, rest and self-determination of workers outside working hours, need to be protected, stating that it is just following the current law.

**Table 4: Corporate social responsibility support concerning working-time.**

Social partner	View
Employers' confederation.	The performance of working hours beyond the normal hours tends to harm the evaluation of the employee, due to the natural loss of productivity and quality of work performed in this situation. It is easier for larger companies to invest in social responsibility initiatives, but there are also smaller companies that have invested in less costly forms of family support, sometimes based on creativity and close relations with their employees.

**Table 4: Corporate social responsibility support concerning working-time.**

Trade union confederation 1.	The promiscuity between family life and professional life is such that it not only has serious repercussions on the physical and mental health of workers, but also brings distortions in these two fundamental areas for the balance of any human being. A society of "ubiquitous knowledge" is a vision that bears restlessness in what it presupposes of debauchery of personal life and promiscuity between the private and public spheres.
Trade union confederation 2.	The responsibility of companies is to respect the labour law and working time limits. In addition, companies can also pay better wages, so that workers can access culture and leisure on equal terms. Companies must have quality jobs, with respect for the principle of job security, so that workers are not always afraid of unemployment, affecting their psychosocial relationship.

5.2. Digital work/telework and working time

**Table 5: Impact of telework (on work-life balance, on labour productivity, in the teleworker's career and on vocational training).**

Social partner	View
Employers' confederation.	It is necessary to evaluate the evolution of teleworking. The recent migration to teleworking was carried out in a very short period of time. There is an awareness of the inconvenience caused by the inexistence of the most adequate working conditions in the homes, namely ergonomics, by the coexistence of more than one person working at home simultaneously with children in school supported at a distance. The persistence of teleworking could have a positive impact on productivity as well as on the well-being of employees (especially those living further away from the workplace and using more time-consuming means of transport). Teleworking itself will have repercussions on future formats of vocational training, probably with a deepening of online training.
Trade union confederation 1.	Telework reduces the inconvenience and expenses derived from the worker's travel to (and from) the company and reduces stress, freeing up time for the worker and allowing a better conciliation between professional life and family or private life. It facilitates the access to employment for people with motor disorders and provides an increase in the quality of life (reduction of traffic congestion and of air pollution, lower energy consumption, requalification of suburban and perhaps rural areas). The disadvantages are mainly associated with home teleworking: greater isolation of the worker, with the inherent risk of social uprooting, psychological wear and tear, lack of solidarity and impoverishment of the collective dimension of work; dilution of the boundaries between professional and extraprofessional life; as well as cause the legal limits on working time to be exceeded.
Trade union confederation 2.	Teleworkers tend to have more autonomy, however, this is often curtailed with excessive interference in their lives, through the use of electronic surveillance means. With teleworking there is a time gain, there is also a loss in privacy, as work starts to invade the domestic space, having to be shared between the company and the family, with all the negative effects that may result from it. At the limit, the worker can also be held responsible for the costs of internet, electricity, equipment and the conditions of the work space that can be arranged.

**Table 5: The role of companies and collective bargaining in telework policies**

Social partner	View
Employers' confederation.	The role of collective bargaining and social dialogue in the implementation of telework policies will have significant changes.
Trade union confederation 1.	A new period "post-covid" is anticipated, with some issues that need to be analysed: the worker's right to privacy, the physical isolation that leads to the individualisation of work relations, the articulation of telework with the reconciliation of family and professional life, as well as the right to disconnect.
Trade union confederation 2.	The teleworking regime needs to be regulated mainly in the field of privacy, remote monitoring by the employer, electronic surveillance. Implementing teleworking policies interests more companies than workers, at least in the short term, but the role of collective bargaining and social dialogue in implementing teleworking policies is important (in the establishment of compensation paid to the worker and in the recognition of the right to reverse the situation).

## 6. Conclusions

As the results of these interviews show, the employers' confederation understands the importance of working time flexibility to work-family balance, namely the impact on motivation, with positive results in productivity. As for the trade union confederations, working time is a problem that breaks down into several dimensions - duration, intensity and flexibility of working time. Flexibility has two meanings: flexibility in the interest of the worker and flexibility in the interest of the employer. And for the trade union confederations reconciliation policies in most cases are used not in the interest of workers. According to the trade union confederations, the right to disconnect is no more than the obligation of the employer to not require work outside the established hours. Formally, there is no "right to disconnect", what exists is an obligation on the part of the employer to respect labour rules, contractual limits and the employee's personality rights. In this sense, it is redundant the idea that the right to privacy, rest and self-determination of workers outside working hours, need to be protected, stating that it is just following the current law. The employers' confederation considers that the performance of working hours beyond the normal hours tends to harm the performance of the employee, due to the natural loss of productivity and quality of work. For trade union confederations, a society of "ubiquitous knowledge" is a vision that presupposes debauchery of personal life and promiscuity between the private and public spheres.

Given the results obtained, it is necessary to evaluate the evolution of teleworking, recognizing that the way in which companies and workers have had to adapt to a new reality, with the required speed, has strengthened the autonomy and capacity for initiative of all players. The recent migration to teleworking was carried out in a very short period, taking into account complexity of this migration. Telework reduces the inconvenience and expenses derived from the worker's commuting and stress, allowing work-life balance. However, it also creates greater isolation of the worker, with the inherent risk of social uprooting, psychological wear and tear, lack of solidarity and impoverishment of the collective dimension of work; some dilution of the boundaries between professional and extraprofessional life, which can threaten worker's private life or increase family conflict, as well as cause the legal limits on working time to be exceeded. For the employers' confederation, the role of collective bargaining and social dialogue in the implementation of telework policies will have significant changes. Conversely, for trade union confederations, the period "post-covid" brings important issues – the worker's right to privacy; physical isolation that leads to the individualization of work relations; the reconciliation of family and professional life; and the right to disconnect – and teleworking regime needs to be regulated mainly in the field of privacy, remote monitoring by the employer, electronic surveillance, as well as in the obligation of the employer to assume the costs arising from telework.

## 7. References

Adisa, T. A., Gbadamosi, G. and Osabutey, E. (2017) "What happened to the border? The role of mobile information technology devices on employees' work-life balance", *Personnel Review*, Vol 46 No. 8, pp. 1651–1671.



- Bathini, D. R. and Kandathil, G. M. (2019) "An Orchestrated Negotiated Exchange: Trading Home-Based Telework for Intensified Work", *Journal of Business Ethics*, Vol 154, No. 2, pp 411–423.
- Blanpain, R. (1997) *The Legal and Contractual Situation of Teleworkers in the European Union*, WP/97/28/EN, Leuven.
- Chesley, N. (2014) "Information and Communication Technology Use, Work Intensification and Employee Strain and Distress", *Work, Employment and Society*, Vol 28, no .4, pp 589–610.
- Crompton, R., Gallie, D. and Purcell, K. (1996) *Changing Forms of Employment: Organizations, Skills and Gender*, Routledge, London.
- ETUI (2017), *HesaMag #16: The future of work in the digital era*, The European Trade Union Institute, Brussels.
- Eurofound (1997) *The Health and Safety Issues for Teleworkers in the European Union*, WP/97/29/EN, Eurofound, Dublin.
- Eurofound (2013) *Organisation of working time: Implications for productivity and working conditions – Overview report*, Eurofound, Dublin.
- Eurofound (2015) *Policies to improve work–life balance*, Eurofound, Dublin.
- Eurofound and ILO (2017), *Working anytime, anywhere: The effects on the world of work*, Publications Office of the European Union and the International Labour Office, Geneva.
- Felstead, A. and Jewson, N. (1999) *In Work, At home: Towards an Understanding of Homeworking*, Routledge, London.
- Frey, C.B. and Osborne, M. A. (2017) "The future of employment: How susceptible are jobs to computerisation?" *Technological Forecasting & Social Change*, Vol 114, pp 254–280.
- Gallie, D., et al. (1998) *Restructuring the employment relationship*, Oxford University Press, Oxford.
- Grant, C., Wallace, L. and Spurgeon, P. (2013) "An exploration of the psychological factors affecting remote e-worker's job effectiveness, well-being and work–life balance", *Employee Relations*, Vol. 35, No. 5, pp 527–546.
- Green, F., (2004) "Why Has Work Effort Become More Intense?" *Industrial Relations: A Journal of Economy and Society*, Vol43, no.4, pp 709–741.
- ILO (2020) *Portugal: Rapid assessment of the impact of COVID-19 on the economy and labour market*, ILO, Geneva.
- Kelliher, C. and Anderson, D. (2010) "Doing More With Less? Flexible Working Practices and the Intensification of Work", *Human Relations*, Vol 63, No. 1, pp 83–106.
- Marcum, T., Cameron, E. A. and Versweyveld, L. (2018) "Never Off The Clock: The Legal Implications of Employees' After Hours Work", *Labor Law Journal*, Vol 69, No. 2, pp 73–82.
- McKinsey (2017) *A Future that Works: Automation, Employment, and Productivity*, McKinsey & Company Report.
- OECD (2013) *Measuring the Internet Economy: A Contribution to the Research Agenda*, OECD Digital Economy Papers No 226, Paris.
- OECD (2016) *New forms of work in the digital economy*, OECD Digital Economy Papers, No 260, Paris.
- Rebelo, G. and Roxo, M. (2019) "The Challenges of Digital Work in Portugal". In Sanguinetti Raymond, W. and Vivero Serrano, J. B., *La construcción del Derecho del Trabajo de las redes empresariales*, Comares, Granada.
- Royakkers, L., et al. (2018) "Societal and Ethical Issues of Digitization". *Ethics & Information Technology*, Vol 20, No. 2, pp 127–142.
- Schwab, K. (2016), *The Fourth Industrial Revolution*, World Economic Forum, Cologny/Geneva.
- Taskin, L. and Devos, V. (2005) "Paradoxes from the Individualization of Human Resource Management: The Case of Telework". *Journal of Business Ethics*, Vol 62, No. 1, pp 13–24.
- Tietze, S. and Musson, G. (2005) "Recasting the Home-Work Relationship: A Case of Mutual Adjustment?", *Organization Studies*, Vol 26, No. 9, pp 1331–1352.
- WEF (2016) *The Future of Jobs - Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*, World Economic Forum, Cologny/Geneva.