



ORIGINAL PAPER

The impact of digitalization on the workplaces

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Abstract:

Few industries will escape the roller coaster of digitalization. Recent studies show that 30% of the revenues of the industrial sectors will be made through new business models in 2025. Digitalization is constantly generating new business models. At the same time, it has a major impact on society and employees. Quantified in the number of lives saved by increasing workplace safety, reducing shopping time and lowering the cost for consumers, digitalization is no longer an abstract concept, but is part of our daily schedule, in private life, but especially at work. Digitalization uses IT infrastructure and the Internet as technological support. According to the World Economic Forum, companies that have achieved digital transformation have, on average, 26 % higher profits than traditional companies. However, technology is only a means through which transformation is generated and not an end in itself.

The paper debates the influence of digitalization on the workplace. From the day the internet came into the world, digitalization has shaken the entire operational structure of workplaces. And nowadays every single thing, whether it's business or individual life, is focused on digital technologies. Some existing studies were on "the effect of digitalization on corporate performance and employee productivity. It is essential to understand that digital transformation at work creates risks as well as opportunities so that the dangers can be removed and the optimistic consequences maximized.

Keywords: *digitalization, workplaces, job satisfaction, work-life balance, worker autonomy.*

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Introduction

Digitalization is one of the hottest topics. Most (if not all) organizations today have some form of digital assets. The first is that jobs and occupations evolve as new technologies bring new roles and different processes for working.

The second change relates to working conditions because the adoption of technology brought with it new physical, psychological and environmental demands. In addition, there are significant employment conditions (i.e., the contractual and social conditions of work). Lastly, there are developments in industrial relations enabling different ways of how employers and employees can arrange their relationship and solve their conflicts. This is something relevant for managers who want to know if digitalization is well perceived by the employees, does it affect the employee's satisfaction/starts to change work/life balance and how far could it increase the level of autonomy for the employees. An astute manager can minimize the potential downsides and allow employees to enjoy the upside.

Digitalization introduced the remote work component, which contributed to the reduction of territorial and social barriers to human resources. This can be an opportunity if viewed from the perspective of the flexibility it offers to employees. Furthermore, digitalization innovates job offers, and the study presents the impact of e-commerce on the activity of the labor market.

The social impact of digitalization generates a fierce debate between the decision-makers, economists and industry leaders. As digitalization disrupts society even more deeply, concern grows about how to problems such as jobs, wages, inequality, health, resource efficiency and security. Digital transformation in social media can also make a positive contribution to society. Focus on three key areas: employment and skills, environmental sustainability and trust.

Why we conducted this research is that in the literature review when we read studies about the effect of digitalization, we understood that there are many but the effect of digitalization on business performance and employee productivity has little literature. Their main concerns were not employee satisfaction and effects on work/life balance and worker autonomy, which were our main concerns.

In studies that focused on the three referenced problems, some of the results were ambiguous or even double-faced. Some of these studies — for example, the relationship between worker autonomy and its association with digitalization— are conflicting. Gerten, Beckmann, & Bellmann (2018) found that, yes, digitalization gave employers way more control over their workers, but Aral & Weill (2007) claimed that digitalization provided more autonomy to the employee. This lack of fidelity drove us to examine the hypotheses.

This study examines the effect of digitalization on job satisfaction and work/life balance alongside worker autonomy. We empirically examine how digitalization affects individuals working in Romanian organizations. This paper is structured as follows. We first present the findings of the literature and prior studies that we reviewed. Next, we describe our methodology, analysis, and findings. Finally, the results are discussed and implications and future directions are presented.

Theoretical background

Accessibility gained through teleworking led to higher productivity at work and more overall demands in the workplace and at home. A European Social Observatory (OSE) exploratory study of the impact of digitalization on job content and quality. The

findings indicated that technology impacts work life. About two-thirds of the surveyed workers found that the digitization process led to work intensification and some increase in the speed of work. This means that something automatic like a computer can process the secondary, repetitive task, so employees can concentrate more on some complex that requires human knowledge. According to studies, digitalization provides more efficiencies and more productivity (Vuori, Helander & Okkonen, 2018). In addition, digitalization has led most businesses and future competitive environments through rapid and even disruptive transitions. Emerging new models of organizations and companies (e.g., Airbnb), and old companies need to rethink their structures, roles, and strategies to reach their new business targets. Kettunen & Lanti (2017) regarded new future competitive organizations as agile, sustainable, and more basic, software-based. In the present era, people feel it is hard to run their businesses and personal lives without digital technologies. New business models and new strategies mean job roles are reorganized which may change satisfaction, work/life balance and worker autonomy.

Job satisfaction

A healthy organizational climate is one of those factors that influence long-term job satisfaction. Stemming from a solid organizational culture, the climate defines all working relationships and how any collaboration takes place internally. The activities that set the framework for a pleasant organizational climate include the selection of employees and their match with the position occupied, the existing organizational culture, the appropriate reward actions, the investment in personal and professional development programs, but also constant communication, by providing constructive feedback.

On-the-job learning is among the main interests of the modern employee. Moreover, investing in development programs will not only contribute to the employee's evolution but will also bring benefits to the employing company.

Job satisfaction is the lever to results. Even though we tend to relate to the workplace as a useful tool in personal development, well, it's about more than that. Doing what we like, and identifying with the work we do, contributes to an inner satisfaction, which is propagated, of course, also on the final results. Although it is said a lot, we can associate job satisfaction with happiness.

Non-wage items of job quality are highly valued by workers (Gallie, 2013). That can be seen in growing efforts, both nationally and internationally, to achieve better-quality jobs.

Multiple measures of psychological well-being suggest that employees' drive and job satisfaction are very strongly correlated with discretion. A high pace of work may negatively affect your psychological health, which includes stress (Salvatori, Menon & Zwysen, 2018). In fact, in the last 20 years, European countries witnessed a massive increase in the use of computers (Salvatori, Menon & Zwysen, 2018), one could assume that the degree of workers' job satisfaction rose to a certain extent with the implementation of new technology, and will continue to do so with the advent of new technologies into mainstream business operations.

Work-life balance

First, the employee's perspective is how effectively he could juggle work responsibilities and personal/family obligations. Second, employers should cultivate a supportive environment keeping focus on employee well-being at work (Lockwood, 2003).

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The use of technology in leisure time brings clear benefits; a person can voluntarily carry out work for their job at home (for example, create a few reports, presentations, and analysis, etc.) (Ratna & Kaur, 2016). Travel has its advantages as well, delegation from city to city eases the task at hand. That is when employees can decide freely where, when, and how they work.

Working past the deadline can be more stressful for someone. Someone must have some ability to call a halt herself, e.g., never checking office mail only while on duty. Results have proved that the evolution of new tools has caused concerns in employees depending on generations (the gap in the workforce). It also depends on the profession one is engaged in, for example, healthcare professionals and teachers in higher education have stated that the use of technology may be stressful. Derks et al. (2014) explored the influence of work-related smartphone use on daily recovery from work-related efforts. They found that being connected to work at home means that a person has less time to recuperate from related efforts. It implies that the smartphone consumers did not correctly manage the recovery path. Smartphones can be referred to as the increased mobility of an employee, but it means that it is easy for the work/life balance to become blurred.

What matters the most, is how one copes with that and like stated before, it's good to have limits, for example, working after one's workday would not be desirable. A smartphone makes an employee more flexible but also enables them to work more long hours thus having the risk of affecting work/home life balance at the same time. Tech itself is neither a demand nor a resource; it depends on how we manage it (Derks& Bakker, 2010).

So, the first step in maintaining balance is to define precise boundaries. Even if someone works from home, he has to create a space dedicated exclusively to professional activities. This will help him focus better during working hours and completely disconnect after it ends. It is also essential to impose fixed working hours. When someone doesn't have a clear schedule, he may find himself answering emails late at night or working Saturday and Sunday. Setting a well-defined schedule helps him to protect his personal time and prevent burnout.

Our study indicates that the work/work-life balance becomes blurred - which means that employees struggle when people do not switch off from work when they go home. An individual cannot regulate the time spent on technology for work, this is another indicator. As a result, we would anticipate that digitalization blurs the distinction between processing work and personal life.

Worker autonomy

Adapting to a digital age is no longer a choice, it has become an essential condition for organizations to remain competitive, improve their operations and respond to the ever-evolving needs and increasingly demanding demands of customers and employees. For example, the COVID-19 pandemic has demonstrated the need for organizations to be agile and flexible, with remote work and digital collaboration becoming the new norm.

Jeff Bezos, the CEO of Amazon, mentioned in a discussion on the topic of digital transformation that "the only sustainable advantage you can have over others is agility".

Sustainable success in a dynamic and ever-changing business environment requires continuous operational and digital transformation. This transformation must be initiated and translated into the organizational culture through an active and sustained commitment from the management team.

A critical element of this transformation is the development of trust among the company's employees. Leaders need to trust that the people in their organization are making the right decisions when they are given the right tools and information, and employees need to trust that leaders support them in their work and help them grow within the organization. Trust is based on a history of interactions and can be sustained over time by adopting technological systems that facilitate the performance of the activity and generate relevant reports on the fulfilment of the tasks assumed. Some disruptive operating models even include a transition from traditional hierarchies based on rigid and bureaucratic decision-making structures to agile organizational structures in which people within the company are empowered to make decisions and act proactively based on well-defined values and principles.

Fostering a sense of autonomy, responsibility, and meaning encourages employees to be more engaged, and innovative, and make valuable contributions to the organization's development. These contributions can be greatly amplified by promoting a culture of continuous learning, developing digital skills and having access to optimal technological solutions that facilitate rapid decision-making and action.

Moreover, optimization can help companies build a culture of continuous improvement, in which employees are encouraged to identify inefficiencies and suggest changes beneficial to increasing operational efficiency. For maximum value, changes to the processes must be agreed upon with key representatives among the beneficiaries and communication quickly and clearly to the people involved in the execution of these processes.

When addressing the coexistence of autonomy and digitalization in working life, it has been proved that both autonomy and monitoring can increase at the same time, according to Gerten, Beckmann and Bellmann (2018). They found evidence that ICT not only encourages decentralization but also centralization; for example, they found that while ICT led to an increase in autonomy for employees (particularly for those holding larger positions, like managers) it also led to an increase in employee monitoring workforce inside the organization.

As a conclusion, there has been quite some research on the issue of technology and worker autonomy, but the results are not unambiguous. So, we examined whether digitalization leads to greater worker autonomy, greater monitoring, or a combination of the two. This information was used as an underlying basis when building our third hypothesis since the majority of economic studies on ICT's impact on organizations indicate that digitalization fosters worker autonomy.

H1: Digitalization positively influences job satisfaction

Hypothesis 2: 'Digitalization' work/life balance blurs.

Hypothesis 3: Digitalization gives rise to greater worker autonomy

Methods

Information on the sample and data collection

This study was developed by using a quantitative approach. We initially conducted desktop research in which we reviewed the literature.

Depending on our assumptions based on different studies, we created an online questionnaire to explore how digitalization changes work. We created the survey on the IKA (One Click Survey) online platform. We sent the survey via email, Facebook, and LinkedIn. As the survey was mostly distributed via network on the Internet, a convenience sampling method was used among relatives (friends, family members,

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coworkers, etc.). The survey covered the period from January 8, 2025, to January 29, 2025. The sample was students and workers in general, dominantly from Romania. We obtained 98 responses (45% men and 55% women). The majority (78%) were aged 20–41; the next largest group (19%) were people ages 41–60.

There were 11 questions (constructs) in the survey, which consisted of 47 variables (items). The survey average time taken was 5 minutes 41 seconds. The initial one questioned the link of the personal workplace with the digitized assignments. This was expressed using an as-even-point Likert-type scale (1 = almost never, 7 = almost always). We borrowed the question from Salvatori, Menon & Zwysen. (2018). The second, third, and fourth questions had a five-point Likert-type scale (1= strongly disagree, 5 = strongly agree) and assessed the outcomes of digitalization on job satisfaction, workplace and work/life balance, and autonomy of work.

Finally, measures of worker autonomy were based on Peña-Casas, Ghailani and Coster (2018). The fifth and the sixth were ranking different categories from most to least important. With these two questions, we aimed to identify the key barriers to the successful adoption of new workstyles and the most critical drivers of workstyle change. Also at the end were sociodemographic questions regarding gender, age, country of origin, working position and industry. To examine the responses from the collected data, a one-sample t-test was found using the statistical software package SPSS. Using it we compared the mean of each construct (which asked about the relationship between digitization and a unique factor) and the mean of the previous domain scale. All three hypotheses were subjected to a one-sample t-test analysis.

Results

Descriptive statistics Table 1 presents the descriptive statistics (means, standard deviations, and standard errors of the means) of the primary variables. The sample size is 98 people.

| | N | Mean | Standard Deviation | Std. Error Mean |
|------------------------|----|--------|--------------------|-----------------|
| Job satisfaction (H 1) | 98 | 3.6268 | 0.64204 | 0.06486 |
| Work/life balance (H2) | 98 | 3.39 | 1.127 | 0.114 |
| Worker autonomy (H3) | 98 | 3.3010 | 0.99933 | 0.10095 |

Hypotheses tests

We conducted a one-sample t-test for the dataset obtained for all three hypotheses. Impact of Hypotheses on Data Distribution. We compared gathered data means for each hypothesis with their scales' midpoint - value 3 (which would represent normally distributed data) and we obtained the following results. The first hypothesis (H1), "Digitalization enhances job satisfaction," which considered digitalization as the dependent variable and job satisfaction as the independent, was accepted ($t = 9.665$, $p = 0.001$). H2: "Digitalization blurs work/life balance" — in which digitalization is the dependent variable and work/life balance is the independent variable — ($t = 3.405$, $p =$

0.001), we also found significantly different means. Therefore, we confirmed that the work/life balance is blurred by digitalization.

Finally, we confirmed our third hypothesis (H3), “Digitalization promotes more worker autonomy,” where digitalization was the dependent variable and worker autonomy with statistical significance ($t = 2.982$, $p = 0.004$).



Conclusion and discussing

The digital transformation of the world we live in is a new phenomenon, but in the same inevitable time, which manifests itself everywhere. However, no one, in any area, has yet reached the final and complete stage, nor has it been able to define digitalization definitively and in unanimously accepted terms. What can be said for sure is that belonging to digital will become even more pronounced in the future, and digital networks will continue to play an important role in this whole process of digitalization, in the lives of people around the world.

According to our survey, we found evidence to support all three of our hypotheses. The first hypothesis that digitalization is good for the employee's job satisfaction was confirmed. This was consistent with our findings and those from previous studies, on digitized workplaces.

We focused on how digitalization transforms workplace autonomy. Various researchers have opposing opinions on it. Some researchers are sure that ICT expands employees' autonomy, while others argue it leads to the stronger control of employees. Moreover, there is evidence that digitalization creates more autonomy and also more monitoring (Gerten, Beckmann& Bellmann, 2018). We conducted this research to establish the case among Romanian employees and avoid going-fetching data of other researchers.

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The research supported our third hypothesis as most of the participants were employees of the organization responded that the freedom progressed to the extent of the digitalization of their organizations. This is a reflection that the usage of technology tools in the workplace enables Romanian employees. The explanation for this outcome could relate to the kinds of workplaces in which the workers who took part in our poll are employed. They are primarily international accounting and auditing firms, for which the application of technology tools is vital (for gatherings, correspondence with clients, completing different assignments and so forth). If we did this research with employees of other types of organizations, we might find that we get different answers.

The article highlights the essential transformations generated by digitalization on workplaces, highlighting both the benefits and challenges of this inevitable process. On one hand, the increase in employee satisfaction by making tasks more efficient and increasing autonomy in the workplace confirms the optimistic prospects for digitalization, which demonstrates that the integration of modern technology leads to a more flexible and adaptable work environment. On the other hand, the study also highlights adverse effects, such as blurring the boundaries between work and personal life, a phenomenon that can contribute to increased psychological pressure on employees, calling for concrete measures to maintain work-life balance.

The statistical results show that digitalization has a significant impact on job satisfaction (H1 accepted), which indicates that access to technology and optimization of professional tasks can contribute to a positive organizational climate. At the same time, the validation of the hypothesis that digitalization blurs the work-life balance (H 2 accepted) signals the need for clear strategies for time management and the strict demarcation of professional and personal activities, in particular by establishing organizational policies on the use of technology outside working hours. In terms of employee autonomy (H 3 accepted), the study confirms that digitalization favours both freedom of action and increased monitoring, which suggests that the success of technology implementation depends on the balance between control and trust on the part of employers.

The concrete solutions that derive from this analysis must aim at adjusting management strategies so that digitalization is a catalyst for efficiency and well-being, not a source of stress or excessive control. Thus, companies should invest in well-being programs, which include training for time management and digital disconnection techniques, thus promoting the mental health of employees. It is also essential to adopt flexible policies on remote work, ensuring that increased autonomy does not translate into an excessive burden on employees, but into a real balance between productivity and quality of life. Last but not least, performance evaluation models need to be reconsidered so that digital monitoring is not perceived as a form of intrusive supervision, but as a tool to support professional development, based on clear objectives and constructive feedback.

In conclusion, digitalization is not only a technological process but also a profound transformation of organizational culture, and its success depends on the ability of leadership to integrate it harmoniously into the dynamics of the workplace, balancing efficiency with fundamental human needs.

Authors' Contributions:

The authors contributed equally to this work.

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