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Digitalize Work in Health Organization during Pandemic Covid-19

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Abstract. Covid-19 has impacted many aspects of daily life. The behaviors of organizations had to adopt this evolution. The Covid-19 emergency has put Smart Working at the center of attention. Working remotely made it possible to cope with the limitations due to the current health emergency while guaranteeing business continuity.

This new "intelligent" mode is increasingly leading to the spread of autonomous, subjective and decentralized forms of work. Technological progress offers rapid access to information and reduces space-time constraints. Modern technologies put at the service of a new way of working, as experienced during the pandemic, allow the worker to manage the organization of space and the execution time of his employment in complete autonomy.

On this basis, the work in progress study seeks to provide useful information to improve practices in the field of smart work, to better investigate the phenomenon in the healthcare sector, a field that has not been explored and debated in the literature.

Keywords: Smart working, ICT, Health sector, Covid-19

1. Introduction

During initial months of 2020, the pandemic Covid-19 has affected several countries all over the world, including Italy. The use of remote working increased during the pandemic and is expected to maintain high levels of application even after the emergency. Benefits for both organizations and workers have been demonstrated: improvements in performance, cuts to the costs of “home-work-home” travelling, saving time and organizational resources, and higher employee satisfaction. Despite its benefits for both organizations and workers, remote working asks for consequences like as the digital transformation of duties and jobs and the evolution of the work environment regarding new needs at an unprecedented speed. With these premises, the present contribution focus on the changing use of technology in managing human resource, in a specific organizational context that healthcare, in order to know potential solutions adopted and eventual implementable improvements for other organizations. The possible aspects that this contribution will explain starts from the impact of COVID-19 on organizations and support offered by technologies. Successively focus will be on job redesign thanks to the new digital opportunities in order to understand how the organization modifies and learns about new ways of performance. The relevant elements of change, the first actors, the time and the effects on performance will be show through one case study analysis, that will permit to better understand if it will be possible to replicate some aspects in others organizations. The case study adopts a qualitative approach according to the methods and instructions suggested by Yin (2009). This involves collecting data through semi-structured interviews and desk research. Specifically, this is a work in progress, where the case study regards a Health Public Organization. The study focuses on the healthcare system because this has had to face a great challenge in this pandemic period since the presence of medical and paramedical personnel is a fundamental component here. However, several patient-related activities, notably treatment planning, multidisciplinary consultations, research and quality assurance do not require physical presence at work, making so called "smart work" possible (Deantonio et al, 2020).

The study seeks to provide useful information to improve practices in the field of smart work, to better investigate the phenomenon, especially in the healthcare sector, a field that has not been explored and debated in the literature.

2. Theoretical Background

2.1 ICT and smart working

The organizations are bringing new changes within themselves due to rapid innovation coming into information and associated communication technologies, known as Information and Communications Technology (ICT). It modifies management practices, modes of communication, methods, the internal workings of the organization, and relations with the environment and local communities (Pupion, 2010, p. 2). The analysis of Garicano and Heaton (2010) “found that IT investments would

reflect an effect on organizational measures” (p. 10). According to the organization studies, Yeo and Marquardt (2015), Hussenot (2008), Arellano-Gault et al. (2013), the disruptive new dynamic technologies have completely brought forced changes in the public sector around the world by continuously challenging the administrative landscapes of major organizations (Decastri et al., 2020). Digitalization is the core of all the possible technological changes (Das, 2020). Ejersbo and Greve (2017) definition of digitization, “focuses on digital change and digitized interactions with citizens and businesses” (p. 269). As Morgan (2013) notes, technology impacts our work. Lindgren and Jansson (2013) define public organizations “as the formal public entities that decide on and organize public administration of different sorts, e.g., state authorities, ministries, municipalities or regional authorities” (p. 167). Government reforms are digitalization driven as it brings multifaceted operation stability and flexibility. Digitization has become an essential component of most government reforms. Bekkers and Homburg (2005) refer digitalization as a core essential for “digital-era governance” (Dunleavy et al., 2006, p. 471). The organization theory builds the theoretical structure for digitalization at every levels. According to Barley and Kunda (2001) “digital technologies are used in a variety of ways and have a variety of effects on the way firms organize themselves” (p. 76). Yeo and Marquardt (2015) emphasized on the diffusion of organizational boundaries due to digitalization.

ICT brings out wholesome changes by innovating the process of work in altering the dynamics of how, where, and when to work (Harvey, 2010). Cantoni and Mangia (2018) see ICTs as one component of the work system and are important tools for completing work and outcomes of change processes, at the same time. The revolution in the fields of ICT does not only influence people’s daily lives but the interactions between public administration and citizens (Bargsted et al., 2019).

Over the last few decades, the rapid advance in the field of ICTs has tremendously contributed to transforming traditional workplaces and work practices (Boudreau et al., 2014). Today, in this pandemic era, we are assisting in a changing scenario within the business landscape.

According to Kurland and Bailey (1999) and Martinez-Sanchez et al. (2007) “the remote work is a form of flexible working that has attracted a great deal of attention because of its multifaceted implications for individuals, organizations, and society to work anywhere and at any time” (p. 10). As a result, there has been an increase in interest shown by both scholars and policymaker regarding “the different typologies of flexible work arrangements, including remote work, home-based telework, mobile work, virtual teams and, more recently, smart working” (Decastri et al., 2020, p. 345). Remote smart working needs a blend of primary requirements (smart devices like phones, internet, laptops, etc.) and secondary establishments (empty spaces, halls, etc.) (Errichiello & Pianese, 2016). Due to Covid-19, there is a surge in remote working requirements (Eurofound, 2020). New demands show a complex challenge. The perfect mixture of proper job design and job fit conditions for an employee is very essential. Wrzesniewski and Dutton (2001) argued for the idea of “job crafting to capture the actions employees take to shape, mold, and redefine their jobs” (p. 180). However, the implementation of ICT redefines the pivotal role of employees (Alvarez, 2002; Lamb & Davidson, 2005). Due to Covid-19, employees prefer to work remotely to avoid

physical transmission of the virus. So, they prefer to work from home (WFH), remote offices, even on the road too (Parker et al., 2017). So, we can safely say Covid-19 is rapidly changing the dynamics of work culture with the closure of business and smart remote working. Remote work refers to a set of flexible working models that, exploiting the potential of ICT, offer employees the opportunity to carry out their activities at a distance from their organization's central offices (Errichiello & Pianese, 2016). In recent years, a growing interest has been expressed about the so-called remote working—a way of working through ICT, which makes it possible to work outside the central office (Burns, 2006; Cascio, 2000; Kurland & Bailey, 1999).

In the context of organizational and managerial literature, in particular, considerable attention has been of institutional, cultural, and technological variables capable of favoring or hindering the adoption of remote work models as well as the multiple benefits that they can generate for the workers, organization and, more broadly, the community (Bélanger et al., 2016; Illegems & Verbeke, 2004; Kurland & Bailey, 1999; Martin & MacDonnel, 2012; Neirotti et al., 2014; Siha & Monroe, 2006).

The wide variety of ICT tools that can be used makes it possible to prepare very large remote working plans, extending their application to a wide range of activities. In this regard, in fact, many studies agree that the nature of the duties does not constitute an obstacle to the adoption of remote working (Campo dell'Orto, 2000; Daniels et al., 2001; Errichiello & Pianese, 2014, p. 18). Remote tasks are numerous and heterogeneous, and, except for those involving the physical manipulation of an object, they range from simple tasks (e.g., secretarial, data upload) to more complex activities with professional and/or managerial content (e.g., programmers, consultants), regardless of the level of operational or informational interdependence. Alternatively, remote work is influenced by the degree of adequacy of managerial practices and the ICT tools and technologies used for its development and management. The more advanced the level of technologies available, the greater the opportunities to extend the remote work to many workers. Remote work refers to employees who work at home, though not necessarily every day. An individual can be a remote worker if their telecommunications link to the office using electronic mail and personal computer links to office servers. Remote management is characterized by the inability of a manager to observe their employees' work processes.

2.2 ICT and Smart Working in Public Organization

Criado & Gil-Garcia (2019) emphasize how public organizations contribute to value creation processes by using the potential of ICT to communicate with citizens and different stakeholders. Authors such as Larsson, Grönlund (2014 - 2016) argue that the use of information technology is leading to digital and intelligent public organizations. According to Buonocore (2020), digital transformation in public organizations involves the use of technology as a driver of change and innovation in organizational design, work processes, cultural orientation to results and customer satisfaction, relying on the skills and competences of employees and managers. Public organizations are more agile, flexible and adaptive organizations thanks to technology (Mergel et al, 2018).

Currently you can work by developing the potential offered by information technology. Through smart working, technology-enabled work should always be smart. Smart working is emerging as an innovative approach to organizing and managing human resources (Decastri et al, 2020). Public organizations are increasingly experimenting with the widespread use of technological innovations to offer their employees new ways of working, eradicating physical and temporal barriers, planning ways of organizing work more and more based on telework, work from home, work mobile (Reina et al, 2020). Public organizations are moving towards a smart working approach in redefining the organization of work to ensure efficiency, effectiveness and to try to increase flexibility and autonomy, promoting collaboration (Ravarini et al, 2020).

As pointed out by Reina and Scarozza (2020) and Ravarini et al (2020) public organizations promote smart working practices, embracing the potential of information technology and enhancing the relationship between administration and employees. Therefore, ICT offers public organizations the opportunity to redesign work organizations and develop human capital and resources.

Smart working allows innovation in the work processes, behaviors and attitudes of employees, managers and citizens. Public organizations are evolving as intelligent organizations and are investing human, behavioral and technological resources to increasingly develop the ability to promote healthy and comfortable work environments and relationships that involve, in particular, collaboration between employees and managers (Romanelli, 2021).

Therefore, public organizations adopt smart working as a way to improve collaboration between innovation and processes, using information technology as a key source of drive.

3. Research Methodology

The work-in-progress paper adopt a qualitative/inductive approach based on one case study, according to the methods and instructions suggested by Yin (2009). This approach involved collecting data through semi-structured interviews and desk research. "Privileged access to relevant information allowed authors to collect data from different sources, increasing the quality of the information obtained" (Benbasat et al., 1984; Zardini et al., 2016, p. 67).

A qualitative study seemed particularly suited to the purpose of the research and the complexity of the phenomenon since it allows us to consider the specific characteristics of the health public organizations (Bamberger, 2000) and also explore the process of implementing new technologies in human resource management, in response to the Covid19 emergency, to learn about the potential solutions adopted.

The case study will allow us to understand better the implementation of new technologies in human resource management during the pandemic. An analysis of a case study was developed because it was considered useful for the analysis of real-life

events in organizations and understanding the meaning of people's experiences. The subject of our case study is the public health organization of the province of Catanzaro.

The data and information useful for this work will be collected through semi-structured interviews and questionnaires to ensure conclusions based on specific observations (Das, 2021; Van Dijk et al., 2007). The interviews will be submitted to 7 directors of different complex units operating at the provincial health authority (ASP) of Catanzaro. The aim is to try to understand how the directors managed the human resources operating in their units during the pandemic period. Knowing the experiences of the directors would help to better understand the implementation process of new technologies in human resource management and understand how ICT can be of support in the management of human resources operating in public health organizations. The interviews can help the authors to better investigate the topic of smart working in typical public health organizations.

4. First consideration and implication

Covid-19 has impacted many aspects of daily life. The behaviors of organizations had to adopt this evolution. The Covid-19 emergency has put Smart Working at the center of media attention. Working remotely made it possible to cope with the limitations due to the current health emergency while guaranteeing business continuity. The experience of this new "intelligent" mode is increasingly leading to the spread of autonomous, subjective and decentralized forms of work. Technological progress offers rapid access to information and reduces space-time constraints. Modern technologies put at the service of a new way of working, as experienced during the pandemic, allow the worker to manage the organization of space and the execution time of his employment in complete autonomy.

In particular, this study would the impact that Covid-19 has had on job design. The planning of postCovid-19 work—especially in public health organizations—must take into consideration elements capable of increasing the quality of working life and productivity. The new basic elements to consider are reduction of physical needs (through the use of digital platforms), increase in workplace and data safety. The relationship between work through digital platforms and remote control appears to be an emerging issue that needs further development and analysis. Some effects of Covid-19 on organizations take additional time to become apparent. At the same time, the rapid development of ICTs will represent a further element of change for the coming decades (Korunka, 2017) in public organizations. Public administrations—in order to respond to the changing context—had to increase their organizational flexibility and reduce response times.

The emergency has made it clear that it is possible to work from places other than the office, but to be effective, this practice must be consolidated.

In public organizations, smart working allows greater involvement of public employees, improving their organization environment and help employees enjoy a better work-life balance. Thanks to smart working we are witnessing the acceleration of the development of digitalization because new service models responding to the

current needs of citizens could be satisfied thanks to the opportunities offered by ICT. Smart working also implies radical changes in the organization of the work of public organizations, inarticulation of tasks and their management, as well as in the operating models with which the tasks are performed by the workers.

On these premises our idea was born of being able to test through a case study if and how the pandemic has actually changed the way of working also in health organizations.

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