



MASTER IN HUMAN RESOURCE MANAGEMENT

THESIS

THE ROLE OF HUMAN RESOURCES DURING A CRISIS: THE ROLE OF TELEWORKING AND OTHER INFORMATION SYSTEMS

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Abstract

The present study aims to develop the role of Human Resource Management (HRM) during a period of crisis, highlighting the contribution of teleworking-telecommuting as a new working reality. The importance of technology with the use of Human Resource Information Systems (HRIS) is supported as shown by its contribution into the HRM functions and the implementation of advanced HR technology tools. The interpretation of crisis has been examined as the present global situation of the Covid-19 pandemic drives the world of work in unknown paths. In turn, this links to the transformation of organizations to a more technology-based activity. Throughout the literature review, the implications of the pandemic to the workplace have been analyzed through the development of HRIS and teleworking in offering an extraordinary working field in the future, while the concept of leadership in crisis period is presented as another solution.

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Introduction

In the last years, environments tend to have become more complex and dynamic: emerging technologies and globalization raise competition forcing organizations to prove themselves high productive, sustainable, and cost effective (Dessler 2013). Therefore, organizations need to identify and implement approaches that foster the effective management of people in the organizations and bridge the gap between employees and the organization's strategic objectives. Human Resource Management (HRM) is an organic part of every organization that play a vital role in the organization's life cycle contributing to its success. Information Systems also affect significantly in the Human Resource Management as they can support in many HRM functions (Papalexandri & Bourantas, 2002).

Throughout the times however, with the most current example of Covid-19 pandemic, organizations have been called to operate during crisis times, forcing Human Resource Management to adjust to the new reality, assuring that the organization's strategic goals will be accomplished. Teleworking has been called to support organizations during this extremely changing working environment of the pandemic and forces Human Resources (HR) function and employees dealing with a restructuring of a technological-based working settings. Virtual practices are also spreading out quickly as a most cost-effective solution, while fewer employees in the future will be needed along with less office space. There is no doubt that new generations may have to work in different ways than the previous employers and employees have shifted to vulnerable creatures that need to deal with upcoming layoffs; social-psychological; economic and health costs. At the same time, individuals are and will be affected according to age; race; ethnicity; gender; personality while different emerging virtual needs occur among employees living alone and with family. In that setting, the concept of leader will need to be re-established, as motivation, training and development needs must be amended to the Covid-19 and post- Covid-19 era (Kniffin et al., 2020).

In the present thesis, during the structuring of the sections, the first chapter analyzes the theoretical framework around the landscape of Human Resource Management as a necessary component of an organization that aims to manage people to achieve its goals. The objectives of HRM namely societal; organizational; functional; personal and the functions of staffing; training; rewards; relations that follows, as the necessity of the combination of them operates for the organization's viability. HR has

shifted its role throughout the decades, becoming a vital contributor in the development and implementation of practices that aim to create a high-performance workplace (Dessler 2013; Armstrong 2006; Katou 2017). Technology has been widely used to the HRM field with the implementation of Human Resource Information Systems (HRIS), as presented in the second chapter.

The Human Resource Information Systems (HRIS) tend to transform HRM functions to a more technology-based field as HR uses ever increasing technology tools for its services. HRIS are collecting; saving; analyzing; using; recovering; and distributing information about HR. Through interactive techniques HRIS can support the HRM functions, customized modules and various IT programs have been designed to support specific tasks and activities of HR. The ethical dimension of employees' data protection is highlighted as the use of security systems, passwords, and restriction of access to unauthorized personage are necessities. The contribution of technology in transforming the HR function develops virtual workplaces; tools; and applications; redefining the future of work and its continuity (Armstrong, 2006; Lengnick-Hall & Moritz, 2003; Papalexandri & Bourantas, 2002). Teleworking constitutes another aspect of the new, “virtual” working reality.

The theoretical framework and various approaches and definitions on teleworking-telecommuting developed by scholars are discussed in the third chapter. The main idea of teleworking creates a new form of work which provides more flexibility to organizations and employees using information technology. The theoretical part is completed with the presentation of the types of teleworkers and the impact of teleworking. EU framework about telework and its aspects implement a clear definition of teleworking among EU Members (Bailey & Kurland, 2002; Kippenberger, 2000; Nilles, 1975; Sostero et al.,2020). The use of technology has modernized work practices, rendering teleworking as a necessity due to the crisis. The Covid-19 outbreak as a global economic and health crisis has changed humanity's lives.

In specific, crisis is analyzed in the fourth chapter and defined as an unwelcome event that causes changes with a negative effect to people. It can be classified in different levels. In specific, the pandemic of Covid-19 first appeared in China and has spread around the world with huge social, economic, and political effects. During the examination, we seek to highlight the implications of Covid-19 to the workplaces as the rapidly changing environment brings to reality high levels of jobs loses and an upcoming global financial crisis. Emergency changes in workplaces introduced technology

and platform-based work environment as a transition to the digital space. HR's role must adjust to the new working reality and leaders through learning and development will grow *crisis leadership skills* to help organizations fulfill their goals (Lerbinger, 2012; Ngowi, 2013; Kniffin et al., 2020; Carnevale & Hatak, 2020; Athamneh, 2018; Onder & Dogan, 2013; Caligiuri, et al., 2020; Gartner, 2020; Dirani et al., 2020).

Finally, recommendations on responding to that unprecedented crisis are introduced in the fifth chapter with the proposal of a holistic-2 pilar - approach constating of the teleworking function and HRIS along with a new leadership model. As the research ground is still precocious, future research should be focused not only on reacting to the arising challenges but also on rethinking the working practices to build the post-pandemic era foundations in a sustainable way (Kniffin et al., 2020; Dirani et al., 2020; Fernandez & Shaw, 2020; McGuinness, 2020; Caligiuri et al., 2020).

1. Human Resource Management

1.1. Defining Human Resource Management (HRM)

Human Resource Management (HRM) or *Human Resources* (HR) is an inevitable component of an organization that aims, with an application of a series of activities, to manage people and works towards desired ends (Papalexandri and Bourantas, 2002). The existence of HRM is linked to the beginning and growth of an organization, defined as a formal constitution of people that work together to achieve the organization's goals (Dessler, 2013). While its origins appearance is dated in the 19th century, during the industrialization period in the USA, however its roots are traced in the late medieval period (Deadrick & Stone, 2014) but it had been only in the beginning of the 20th century that had shaped its scope and been introduced in the scientific field.

Therefore, the field of HRM initially formed and known as *Personnel Management* has experienced many transformations through decades (DeNisi et al., 2014), while many theories, approaches and practices have been developed which have set HRM from an important maintenance function to a source of sustained competitive advantage for organizations (Ferris et. al., 1999).

Human Capital Management (HCM) is another term that scholars have tried to define and explain the differences with HRM. According to Armstrong's definition (2006) the basic difference is that HCM is based on data reports analysis to make decisions on strategic investment, operational issues or added value employees. HR Metrics define the approach on people's management, that are considered assets attributing a competitive advantage and as such they should be considered as part of a strategic investment in terms of talent management, engagement, retention, and development (Armstrong, 2006). In that sense it could be suggested that HCM strengthens the HRM and does not replace it as they are both essential aspects of people management with a different focus area.

Another aspect of HRM refers to *Strategic Human Resource Management* (*SHRM*). The term derives by the combination of organization's strategy with HRM. In other words, while HRM focuses on policies and practices regarding the recruiting, learning and development, performance management, reward, and employee relations, SHRM includes strategy, integration, and competitive advantage to the HRM. In general, SHRM is the implementation of HRM policies and practices so that the organization's

strategy and effectiveness will be accomplished through the strategic management approach (Hendry & Pettigrew, 1986). HRM is an organization's function that refers to managing relations between various stakeholders and environments. Therefore, it holds a pluralistic role as it aims to fulfill many objectives at various levels.

1.2. Objectives of HRM

The main purpose of HRM is to accomplish the organizational goals through people. In general, its objectives can be categorized as follows (Katou, 2017):

1. Societal: HRM attends the legal; societal; and ethical frames. This means that it should respect them and act in favor of people and society. Otherwise, society will react and be against of the organization.

2. Organizational: HRM supports an organization to enrich and increase the sources of competitive advantage, by providing the means to achieve efficiency and effectiveness.

3. Functional: HRM contributes to the effectiveness of the department itself, so that the organization's goals will be met.

4. Personal: HRM empowers people to achieve their personal goals, so that they will be motivated and remain committed. The combination of accomplishing personal and organizational objectives is an important driving force that improves the employees' effectiveness and productivity.

Overall, the HRM aforementioned objectives are implemented through HR related activities that refer to different HRM functions.

1.3. HRM functions

Armstrong (2006) states that Human Resource Management operates through related systems and is consisted of HR *philosophies* (guiding principles); *strategies* (direction); *policies* (guidelines on values, principles, specific strategies); *processes* (procedures); *practices* (informal approaches); and *programs* that enable the elements to be implemented (Armstrong, 2006). All the above refer to HRM functions organized in four categories (Katou, 2017).

1. Staffing or Employee Resourcing

1.1. Job Analysis: determines each employee's job and among the other functions, plays a key role.

1.2. HR planning: refers and plans the staff required for a company so that it succeeds its goals.

1.3. Job Description: describes the role and duties of each position and is a part of the job analysis.

1.4. Person Specification: describes the required and desired qualifications of a candidate.

1.5. Recruitment: is the process of identifying and attracting qualified candidates for a position.

1.6. Selection: includes the process of screening, (long/short) listing, testing/interviewing candidates to achieve the *matching* with the position.

1.7. Employment: refers to the hiring and onboarding of the new employees.

2. Training and Development

2.1. Individual and team training: includes training, education and development and can be summarized as an ongoing process to improve the performance of individuals in an organization.

2.2. Monitoring training and development: is the process of overseeing the development and quality of programs offered to employees and how they contribute to their development.

2.3. Job design: describes the required jobs of an organization and how they will be designed to achieve maximum productivity and satisfaction rates.

2.4. Performance Appraisal: evaluates employees' performance based on the standards set and plans for his/her development.

2.5. Talent Management: is an ongoing process of planning, recruiting, developing, managing, and compensating of valued employees throughout the organization.

2.6. Career Management: is the process of supporting employees to understand and develop their career skills and interests better to use them effectively.

3. Rewards

3.1. Job evaluation: describes a systematic way of evaluating a job in relation/comparison of the other jobs in the organization.

3.2. Remuneration: includes salaries, wages, compensation, payment terms and conditions.

3.3. Benefits: refer to indirect pay of the employee providing health insurance, stock options etc.

3.4. Incentive Schemes: relates to programs designed to motivate employees to increase efficiency and productivity.

4. Employee Relations

4.1. Employee involvement: is the employee participation in decision-making processes in job-related issues in the organization.

4.2. Employee participation: refers to employee participation.

4.3. Communication: is the communication process and information sharing practices followed in the organization.

4.4. Health and Safety: relates to all the processes and activities that safeguard a healthy and safe environment for employees that will empower the employees' commitment.

The field of HRM is undoubtedly extraordinarily rich, and the references are not exhaustive as it has been a short introduction attempting to clarify basic terms and approaches. However, the aspect that should be highlighted refers to its importance and contribution to the organizations that implement it.

1.4. Contribution of HRM

Dessler (2013) discusses the shift in the HRM role and its significance in the organization's environment since it has shifted from the traditional and transactional role of hiring and firing people. HRM is now responsible for supporting managers identifying the right people; orienting; and training new employees ensuring that they will be effective for the organization.

Purcell et al. (2003, as cited in Armstrong, 2006) also refer to the HR impact in the development and implementation of practices for functions such as recruitment; selection; talent management; rewards etc. aiming to create a high-performance workplace. HR works on increasing employees' motivation and commitment and develops a positive psychological contract aiming to create a healthy working environment. It also supports the organization's vision and values by creating all the required policies and practices for effective management. However, the constantly changing environment, the globalization which raises competition and the information technology development require HR to adjust and apply new technological Information Systems that will provide HR with the relevant data, facts or analytics that will support in decision making in terms of practices and policies (evidence-based human resource management) for the organization (Dessler, 2013).

2. Human Resource Information Systems – HRIS

2.1. Defining Human Resource Information Systems (HRIS), Human Resource Management Systems (HRMS), e-Human Resource (e-HR)

Nowadays, with the development of technology a shift takes place to the HRM that tends to transform to a more technology-based field. More and more organizations use web-based applications and HR related services performed through technology as research has showed that organizations that implement advanced HR technology tools have a competitive advantage towards the ones that do not.

The modern framework requires organizations to change their HR practices and turn to the “e-HR” (electronic HR) era to simplify various processes, decrease the administration workload and other costs, enhance service improvement, become more competitive, provide valid and accurate information on employees allowing managers to take the most effective decisions applicable resulting in shaping a new more strategic role for HR in the organizations (Armstrong, 2006; Johnson & Gueutal, 2011). As the Society for Human Resource Management (SHRM) reports “equipped with hard data, HR can know more, do more and be better business advisors” (SHRM, 2002, p.ii).

Like e-commerce, e-HR was first used at the 90’s as a term, referring to the use of internet in HR field that provided information to managers and employees anytime and anywhere through internet access. “It’s the switch of the automation of HR services towards technological support of information on HR services” (Ruël et al., 2004, p.365). Today a “total e-HR system may include enterprise resource planning (ERP) software, HR service centers, interactive voice response (IVR), web applications, voice recognition systems (VRS), and manager and employee portals” (Lengnick-Hall & Moritz, 2003, p.365).

A more specialized aspect of e-HR is considered the Human Resource Information Systems (HRIS) or Human Resource Management Systems (HRMS). According to Fischer et al., (1999, as cited in Papalexandri & Bourantas, 2002) HRIS are systems that individuals can collect; save; analyze; use; recover and distribute information about the human resources of an organization. Thite & Kavanagh (2012) argue that HRIS include not only computer hardware but also software; people; forms; policies; procedures; and data (Thite & Kavanagh, 2012).

“Keeping the customer in mind” is a fundamental principle of every organization and HRIS “helps by providing the technology to generate accurate and timely employee

information to fulfill this objective” (Thite & Kavanagh, 2012, p.13). To continue with, their implementation may affect and, in some cases, restrict the personal relationship among the HR staff and employees (Johnson & Gueutal, 2011).

According to Lengnick-Hall & Moritz (2003) three major forms have been developed of e-HR:

- 1. Publishing Information:** using intranet information can be delivered from the organization to the employees or managers as a one-way communication.
- 2. Automation of Transactions, Workflow, Supply-chain Integration:** intranet and extranet are used together with different application programs, paperwork is replaced by electronic input, access from employees to databases became easy, update, search information and taking decisions.
- 3. Transformation of the HR Function:** the highest-level form of e-HR redirects HR function from operational towards a strategic focus. HR can play an active role of the organization's "intellectual capital", developing its "social capital" and facilitating the "knowledge management" (Lengnick-Hall & Moritz, 2003, p.365-369; Marler & Fischer, 2013).

2.2. The use of HR technology

Technology and its innovations transformed the way of the managing of HR processes. The principal goals of HR using technology and IS according to Stone et al. (2015) are:

- 1. Attracting a talented and diverse workforce:* organizations can use interactive techniques (virtual job fairs) to attract applicants, by using electronic recruiting (e-recruiting).
- 2. Selecting talented and diverse employees:* e-selection uses various forms of technology for Electronic job analysis; Electronic job applications; Electronic tests; personality inventories; and Electronic interviews.
- 3. Increasing the knowledge; skills; and abilities of employees:* through “e-learning” or “e-training” a wide range of learning and training material is provided online.

4. *Managing and enhancing employee performance:* performance management system (e-PM) can be used in performance measurement and performance feedback.
5. *Motivating and retaining talented employees with diverse backgrounds:* e-compensation systems can support automation of payroll systems; design of compensation systems; communication; and administration of compensation; and benefits (Stone et al., 2015).

As a result, Human Resource Information Systems (HRIS) can support different HRM functions:

- *Job Analysis:* information from every job analysis can be passed to HRIS as modules that can be used to classified and categorized per criteria and undergo changes (Papalexandri & Bourantas, 2002).
- *Staff Recruitment:* in the case of internal vacancies the use of HRIS modules assists in the drafting, announcement, and internal notification of job vacancies. Also, they control the application process, combine the qualifications, and identify the suitable candidates through the organization. By automatically finding candidates through searching for specific qualifications, it is possible to identify the suitable candidates in large organizations in different geographical locations. The advantages of e-Recruitment are summarized in the low cost of implementation, the reduction of hiring time, the impact on many stakeholders, better quality applicants, strengthening the corporate image, targeting specialized groups of employees, way out for the "passive job-seeker" and international coverage (Papalexandri & Bourantas, 2002, Johnson & Gueutal, 2011). Additionally, the objectiveness and standardization of the process is increased (Johnson & Gueutal, 2011). On the contrary, its weaknesses include the lack of know-how for its development as well as its financial resources, the diversity impact as the use of internet is not the first choice for job seekers, it is more effective for university graduates and IT specialists as well as for already known companies and there is a risk of excessive number of answers (Papalexandri & Bourantas, 2002). The use of technology-based solutions reaches a larger applicant pool, but the quality of applicants was lowered from the expected

leaving them with under-qualified or ineligible applicants. (Chapman & Webster, 2003).

- *Staff Selection:* the management and scoring of the aptitude tests can be done, the evaluation of the candidates' qualifications, the selection through a customized interview model without the human presence, as well as the guidance of the interviewer through customized questions depending on the proposed position. In addition, the uses of the intranet for virtual HR applications can be helpful to the employees for career management through a personalized self-service (Papalexandri & Bourantas, 2002). The advantages of e-selection refer to resource and time reduction to conduct the selection process, flexibility in the test location conduction, improvement of efficiency of selection tests, strengthening of the ability of provision of adaptive testing to the applicants. However, the disadvantages refer to the security of the test content and possible cheating by the candidates that affect the effectiveness of the test, candidates' concerns on the privacy and security of their responses and the legality of the screening and tests to the position and organization, making sure that no group is excluded or poorly presented (Johnson & Gueutal, 2011).
- *Human Resources Development and Career Planning:* the selection of employees to participate in training programs, the search for who has been trained and the subject of training, the cost and the training program are done through the HRIS modules. Additional functions on using computers is the distance and computer-aided learning. For example, executives by using self-assessment questionnaires proceed to diagnose their developmental needs. Through the planning of the professional career, self-assessment of abilities, personal preferences and values and exploration of jobs and prospects are done. There are systems intended for high-ranking executives such as "AT & T's Leadership Continuity Program Tracking System" which can store data on the leadership skills of 3000 executives through 275.000 people from 41 countries, powering the succession system of 130 senior jobs (Papalexandri & Bourantas, 2002). In the advantages of *e-learning* is that it reduces training costs and increases flexibility by providing increased level of control to the learners, enabling them to adjust according to their time and availability. At the same time, if trainings are not assessed properly, they can be source of costs without benefits, as employees may attend trainings but not learn

and be benefited. The learning autonomy can be a disadvantage if the learner is familiar and experienced with the process. Finally, e-learning deprives participants from networking and socialization (Johnson & Gueutal, 2011).

- *Performance Evaluation:* the automatization of collection of performance, monitoring of employees work and support on the conduction of the evaluations can be facilitated through the system (Johnson & Gueutal, 2011). As the perception by the evaluator side, positive or negative, can affect the performance evaluation, HRIS can, through the evaluation of the score distribution of each evaluator, identify the error and look for the causes that caused it. Through a series of comparisons, the performance evaluation for each employee is obtained (Papalexandri & Bourantas, 2002). E-evaluation gives the opportunity in accessing to up-to date information regarding the employee, enabling managers to provide more accurate feedback. Objectivity can be increased, and the employee can receive through the HRIS a generated performance feedback. Biases can also be reduced as the system includes a record of the employees' performance while performance information can be linked with other HR function such as compensation plans. However, employees might focus on the "measurable" duties connected to the performance and disregard others with an effect on quality. Managers also might become less participative in the process and rely mostly on the system and data. The system might also lack in depicting the job complexity of a position (Johnson & Gueutal, 2011).
- *Remuneration and Additional Work Benefits:* the use of automation of employee attendance and working hours; the computerized systems in record keeping; overtime payment and payroll deductions; setting wages; bonuses; etc., facilitate the management of remuneration and benefits. Lockheed Missiles Company and Space Company implement a plan for the productive use of merit funds (Papalexandri & Bourantas, 2002). With the e-compensation systems a quicker access to the related information can be achieved leading to better compensation or incentive models, discrepancies in the pay structure can be tracked and employee's awareness on external salary data will be raised safeguarding equity and transparency. What is important though, is to keep the system updated and managers to keep in mind that there might be aspects not captured in the system, therefore their personal feedback is also needed. With regards to the e-benefits,

advantages include the cost reduction in benefits delivery or penalties reduction and compliance, provision of access to the employees and empowerment to manage their own benefits. However, the need of experienced HR staff should not be disregarded along to facilitate the processes, discuss with employees as the incapacity of the systems to inform employees on more complicated issues should be taken into consideration (Johnson & Gueutal, 2011).

- *Health and Safety:* with systems can be recorded the type of training of safety rules for each employee, to be informed about dangerous chemicals and to apply claims for compensation. Also, to assess the health risks; lifestyle changes; stress; and proper nutrition planning for the employees. General Dynamics Company uses an HRIS module named “Healthnet System” to keep records of occupational diseases and accidents, issue reports and locate hazardous materials (Papalexandri & Bourantas, 2002).
- *New and Future Applications:* examples of new innovative practices are a) online survey of employees' opinions, which was adopted by IBM, to draw on employees' views at regular intervals about job satisfaction and corporate values. Advantages of the system are the participation and acceptance of the employees, the ease of adding questions, the faster coding and analysis of the answers, the identification of the problems becomes faster b) expert systems, a clever program that tries to copy the reasoning of a person-expert in decision making (Papalexandri & Bourantas, 2002).

HRIS can support HRM in various ways. However, the use of e-HR practices includes some limitations as they employ one-way communication systems, they are impersonal, passive and may preclude individuals with low computer skills from gaining access to job opportunities (Stone et al., 2015).

Therefore, systems need to work in parallel with HR staff to accomplish effectiveness. Systems should not replace HR staff, although HR staff must develop further digital skills. Additionally, employees need to be digitally literate and e-engaged to make systems more efficient (Johnson & Gueutal, 2011).

Despite the long use of technology, there is a dearth of studies about e-HR processes. Most research is on e-training and e-recruiting and less which e-HR enables organizations to achieve their basic goals. All in all, technology must enhance the role of managers and

HR professionals in organizations (Stone et al., 2015). Hence, there are many Information Systems that HR practitioners and managers are fortunate enough to have at their disposal various supportive means.

2.3. The structure of Human Resource Information Systems (HRIS)

Through Information Systems (IT) and the use of new technologies, can be achieved an integrated level of coordination and communication of the employees and employers within a business. There are various IT Systems listed below:

1. *Transaction Processing Systems (TPS)*: they are providing information about the organizations activities and transactions.
2. *Business Intelligence Systems (BIS)*: they are analyzing and providing data to cover the needs of the administration to take the correct decisions.
3. *Management Information Systems (MIS)*: they are giving information to middle managers about the organization's performance and to reports for future prediction.
4. *Decision Support Systems (DSS)*: they are using information from TPS, MIS and external sources to make the correct decisions on problems.
5. *Executive Support Systems (ESS)*: they are displaying graphs and data for senior management to make decisions through intelligence analysis methods.
6. *Human Resources Information Systems (HRIS)*: they are “the evolution of human resources management systems and ensure that staff is appropriately allocated to meet the organization's needs” (Antonopoulou et al, 2018). Talent Management Applications is a sub-system of HRIS that connects talent workers with specific departments.

According to Sprague et al., (1982, as cited in Thite & Kavanagh, 2012) the basic types of computer-based systems can be divided in three basic categories: *Electronic Data Processing (EDP)*; *Management Information Systems (MIS)*; and *Decision Support Systems (DSS)*. Electronic Data Processing is focusing on data; storage; processing; integrating of files; and summary reports while MIS and DSS were presented in the preceding paragraph. Thite and Kavanagh identified another type of HRIS, the *Human Resource Management Decision System (HRMDS)* as an ideal system of providing critical information for decision making (Thite & Kavanagh, 2012).

In summary, every Human Resource Information System must include:

Databases: united databases contain necessary information of the employees about personal data, job position and salary and they are a united system as they are entered once and any mistakes in changing or updating any element can be avoided.

Screens - Tabs: every module has its own tab screens per employee for entering; modifying; or retrieving personal data.

Intersection of data - Information: the referential integrity gives the opportunity to the system to detect errors and inaccuracies from the relational databases.

Modules: most modules can provide personal information about employees (like age; sex; date of recruitment etc.) that can be accessed by secondary modules for performing additional functions (position control; benefits; and bonus management; payroll; human resource planning, etc.)

Query Programs: advanced HRIS can generate special reports, answer questions using a two-way communication and play an important role in decision support (Papalexandri & Bourantas, 2002).

The figure below presents different stakeholders that need access to different type of HR information highlighting the need of existence of various types of HRIS like *HR portal* where every individual can have customized access any time to information and resources related to his/her position, *employee-self-service* (ESS) where employees can keep and update their personal information and *manager-self-service* (MSS) where managers can receive direct HR reports and facilitate various HR issues online (Johnson & Gueutal, 2011).

Examples of HR Data Accessed by Various Stakeholders

Position	Types of Data Accessed
Applicants	Job openings. Application blanks. Data on the company.
Employees	Benefits enrollment. Personal data. Dependent data. Retirement planning scenarios.
Managers	Training investment factor. Cost-per-hire. Turnover costs.
Executives	Data for HR forecasting and costing. Succession plans.
External Groups	Time and attendance data. Dependent health insurance status. Payroll information. COBRA status.

Figure 1: Examples of HR Data Accessed by Various Stakeholders (Johnson & Gueutal, 2011)

Like any Information System, HRIS are based on information to be functionable and useful, which is most of it, personal and sensitive. Therefore, organizations must

respect the regulations referring to the data protection and contact the relevant data protection department of the organization in any possible breach of the regulation presented below.

2.4. Data Protection

The ethical dimension of the issue of employee privacy under HRIS, needs special attention, both in terms of the type and number of information gathered by employers and in terms of how it is managed. The increasing use of computers for the collection of personal and confidential data creates a need for access protection by unauthorized persons. The use of security systems; the use of a multi-level password; and a special access card in the information center; the restriction of access to unauthorized persons are ways of restricting uncontrolled access to personal information.

At the same time, the accuracy of the information and the proper management of the employees' files must be subject to restrictions and there must be a written consent of the employees towards third parties. The retention and use of personal data such as medical records and insurance data should be limited and kept separately from other information (Papalexandri & Bourantas, 2002).

General Data Protection Regulation (GDPR) of EU established a new data privacy regulation since May 25, 2018¹ (replaced the 1995 EU Data Protection Directive 95/46/EC) that aims to protect the personal data of EU residents through a wide range of data privacy and security requirements. Key changes for HR is the *Wider scope* for all EU employees and employers handle EU's resident data, a *Personal data redefined* to "any information relating to an identified or identifiable natural person", includes *Vendors held accountable*, *Standard breach notification requirements* by the employers must be reported within 72 hours, *New security roles* for business monitor personal data as part of its core activity, a Data Protection Officer is required, *New employee rights* on how their data are used, access, obtain, rectify, request the deletion of their personal data and to withdraw consent to being processed².

¹ <https://eur-lex.europa.eu/eli/reg/2016/679/oj>

² <https://www.people-doc.com/hr-and-the-gdpr-everything-you-need-to-know-for-hr-compliance>

2.5. The contribution of technology

Technological development will transform the HR function using sophisticated Web Portals like Dell's visionary prototype called "personalized corporate portal", a dynamic generated page that combines information of what the company knows about an employee needs to be successful and what an employee believes that needs to be successful. Decision-support tools will be more sophisticated with the use of "predictor" algorithms in forecasting potential problems. Virtual workplaces will be usual in the future; on-line meetings; project-team workspaces; web conferences; video conferencing.

Their advantages to organizations are: time and travel expenses saving, eliminate the lack of access to experts, organized whether or not members are in reasonable proximity to each other, use of outside consultants without travel and lodging expenses, expand potential labor markets, hire and retain the best employees from any location, both personal and professional lives for the employees, dynamic team membership for easy moving to different projects, employees can be join multiple teams and team communications and reports are available on-line. Employee opinions and attitude will be done at the same time using e-HR "pulse surveys", electronic chat rooms and "open door" e-mail.

However, HR professionals will need IT skills and knowledge to use the new systems (Lengnick-Hall & Moritz, 2003, p.373-376). Digital transformation may lead to "digitalization traps" like the costs of biased and slow decision-making using big data, the lack of holistic judgment and intuition and the demotivation of creativity and novelty at the lower levels of the organization (Nell et al., 2020).

Practical tools are already used for various purposes as presented below:

1. *Sharing and storing files applications*: they are in the cloud facilitating the daily workflow, by allowing access from any computer such as Dropbox; OneDrive; Tresorit; Google Drive; Wetransfer.
2. *Messaging applications*: they are providing faster, easier, and more concise communication like WhatsApp; Facebook; Messenger, Viber; Signal; and Flock.
3. *Exchanging of ideas*: teleconferencing services are using Zoom; Cisco Webex; Big Blue Button; Google Meet; GoToMeeting.
4. *Project management and monitoring tools*: they are used for the supervision of all processes like Asana; Trello; Basecamp; Freedcamp; Monday.com.

5. *Collaboration tools*: Slack; Microsoft Teams together with Office 365; Google Docs; Zoho Remotely; and Ryver etc. are increasing productivity, fulfilling the goals of the company and the stability of communication between the members of a working team.

6. *Time management tools*: Toggl; Clockify; Avaza; Timely; Harvest; can help on managing the daily responsibilities and controlling the hours that are spent on specific activities and tasks.

7. *Practical translation tools*: they are extremely useful for translators covering a wide range of their needs such as Memsources Cloud; Wordfast; Matecat; Xtmcloud and Smartcat. Together with the translation office management tools like LspExpert; Protemos; Xtrf; Projetex; and SDL Trados Business Manager, are playing the role of an online office.

8. *Firewall applications*: they block unuseful websites or enforce notifications, such as Freedom; Cold Turkey; Rescue Time; StayFocusd and Focus.

9. *Virtual private network (VPN)*: it helps in browsing anonymously without revealing any personal IP, commercial VPNs are ExpressVPN; NordVPN; SurfShark; LastPass; and CyberGhost³.

Mixed Reality technology tools are merging real and virtual environment for employees working from home, redefining the future of work. Companies will reduce cost and increase revenues by activating remote employees; improving collaboration; innovation; and knowledge worker productivity through multidimensional “collaboratories”.

Virtual Offices are creating a virtual environment of an office using mixed reality programs like Sneek and Pukkateam, creating a feeling of working together. Snapshots can be used to turn to a video call any time, team chat messages with emojis, and GIF-supported jokes can contribute to a fun working atmosphere.

Virtual Focus Groups created virtual environments by platforms like Remesh enable massive digital surveys for market research using insights from small focus groups. More voices can be heard as more employees can participate, anonymity and scale of the online platform let employees participate freely. *Virtual Collaboration* tools like online sticky notes; shared digital whiteboards; live co-editing wikis; slides; and documents creating more opportunities for all team members to contribute realizing better and more holistic solutions. The future of mixed reality work will have artificial

³ <https://www.metafrasi.edu.gr/newsletter/ergaleia-tilergasias-ebook.html>

intelligence tools; smart home boards providing immersive full-size format; 3-D printers for physically test prototypes; home deliveries by drones (Murray, 2020).

Finally, another emerging technology-oriented function that must be mentioned refers to the teleworking-telecommuting trend that due to the Covid-19 crisis, its implementation has been widely implemented and diffused.

3. Teleworking-Telecommuting

3.1. Defining Teleworking

It goes without saying that the concept of teleworking-telecommuting has been an innovative approach especially for the times initially introduced in people's life. Almost fifty years ago work and home spaces have been considered as separate spaces without any connection or function.

However, with the introduction of teleworking or telecommuting that relationship has shifted. Specifically, the term “teleworking” or “telecommuting” has been defined as an alternative way of work which provides more flexibility to organizations and employees. In general, it refers to a work arrangement where the employee provides its services remotely as its implementation is based on the use of tele-communications equipment.

The European Framework of Telework defines teleworking “as a form of organizing and/or performing work, using information technology, in the context of an employment contract/relationship, where work, which could also be performed at the employer's premises, is carried out away from those premises on a regular basis” (2002, Article 2)⁴.

The term is originated in 1973 and introduced by Jack Nilles, who is considered the father of telecommuting/teleworking. Jack Nilles participated in the first pilot telecommuting project where along with an interdisciplinary team at the university they developed and tested telecommuting in a real environment⁵.

According to Shirley (1988, as cited in Hersh, 1996), its first appearance though dates back in 1957 when the first telecommuting scheme supported the scientific community in Boston with home based computer expertise but the real beginning of teleworking has been in the 70s where it was considered as a technology supported solution to the oil crisis that had raised concerns at that time in relation to gasoline consumption, traffic congestion, urban congestion, long work to commute in big metropolitan areas and environmental issues (Bailey & Kurland, 2002). The basic idea

⁴ https://www.eurofound.europa.eu/sites/default/files/ef_files/docs/eiro/tn0910050s/tn0910050s.pdf

⁵ <https://www.jala.com/history.php>

has been that with the intervention of ICT technology, the labor force would disperse geographically, leading to the decrease of commuters.

3.2. Teleworking versus Telecommuting

The terms teleworking and telecommuting are used many times interchangeably, however according to Nilles (1975), in fact they are not the same:

- **Teleworking:** constitutes “any form of substitution of information technologies (such as telecommunications and/or computers) for normal work-related travel” and refers to “moving the work to the workers instead of moving the workers to work” (Nilles, 1998, as cited in Kippenberger, 2000, p.6).
- **Telecommuting:** constitutes “partial or total substitution of information technologies for the commutes to work” and refers to “periodic work out of the principal office, one or more days per week, either at home, a client's site, or in a telework center” (Nilles, 1998, as cited in Kippenberger, 2000, p.6). Therefore, telecommuters usually hold a traditional workspace and combine it with another alternative workspace from 1 to 3 days in a week (Hill et al. 1998).

The biggest difference among the terms is related to the time to commute from the workplace, whether it refers to reduction or elimination of the daily commute. In that sense, telecommuting is a form of teleworking⁶.

At the same time, according to Taskin and Bridoux (2010) teleworking is mainly used in the European literature and refers to work arrangements conducted from different locations such as the neighborhood work centers, clients’ premises, or home or ‘working on the move’ whereas telecommuting refers to working arrangements that support on avoiding commuting (Huws et al., 1990, as cited in Taskin & Bridoux, 2010) and refers mostly to home-based teleworking (Venkatesh and Johnson, 2002) while Mokhtarian (1991) defines teleworking in connection to the use of Information Computer Technology (ICT) such as teleconferencing, on-line data-base searches, cellular phone calls, voice mail, and electronic and perceives teleworking as a form of telecommuting along with remote work which will be explained below.

⁶ <http://www.jala.com/history.php>

3.3. Types of Teleworkers:

Taking into consideration the aspects and factors for teleworking, the below types of teleworking-telecommuting are identified by Nilles (1998, as cited in Kippenberger, 2000; Gareis, 2003) can be identified:

1. **Home Based:** employees transform and equip with their homes equally to an office space relevant technology. They must work at least one day full day per week and communicate with the central organization via telecommunication facilities and use of PC. The rest of the days they work at their organization's premises. In case, teleworking is extended to the 90% of working time, then the person is called permanent teleworker, while in case it consumes less than 90% of time but for more than one day, the person is called as alternating teleworker. However, there is also the category of the self-employed home-based teleworkers who can work either from their home or small offices (SOHOs) and their basic workplace is their home and communicate with other partners with the support of the ICT technology. A subcategory of the home-based teleworkers is the one called *supplementary* teleworkers that telework less than one full day per week, therefore they conduct occasional teleworking.
2. **Satellite Telecommuting Centers:** employees work in that case at fully equipped centers that are selected due to the convenient location saving commuting time for employers and decreasing the office costs-however the centers still need to include planning and administration facilities to work properly.
3. **Local Telecommuting Centers:** employees work similarly to the satellite telecommuting centers but may also enjoy other services such as catering or communications while the number of hosted employees which can be from various organizations is less.
4. **Combination:** employees can combine home base work with central office or telecommuting centers.
5. **Telecottages:** employees visit these facilities which are locally based and provide them with the opportunity for development, personal communication, and other skills.

Mokhtarian (1991), uses a slightly different classification of work types as she refers to the term of remote work where telecommuting is perceived part of it. According to the scholar remote work types are distinguished among:

- a) Homebased classified to owners of a home-based business as a primary job and the “moonlighters” who run a secondary home based in addition to their primary job. They also refer to salaried employees working their overtimes from home and salaried employees working from home in lieu of in office work.
- b) Non-home-based classified workers that work from local or satellite centers, or field workers or workers during travelling or branch managers.

Finally, she identifies the long-distance telecommuting as another type of remote work, home or non-home-based (Figure 2). However, teleworking will be used interchangeably with telecommuting in that dissertation as a definition consensus has not been provided by the scholars.

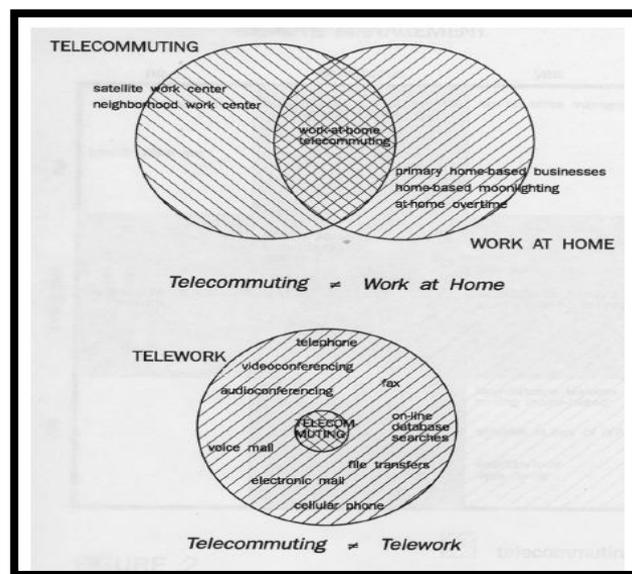


Figure 2: Telecommuting and other related work types (Source: Mokhtarian, 1991)

3.4. New Era of Teleworkers - Cross Borders Telecommuting

Teleworking-telecommuting has a longstanding presence and while the definitions can remain the same, its role seems to change as it is called to respond to new

needs both for the employers and the employees. Living and working in globalized, high-tech environments require interaction with different people around the world.

More specific, a new trend for organizations is to work on international outsourcing and international telecommuting. This means that an organization can outsource from another unaffiliated organization in another location, abroad products, or services. In that sense the need for international telecommuting arises as the organization in one country may allocate some employee(s) to work overseas to support the organization. While this situation would seem difficult and even impossible some decades ago, nowadays with the use of tools and equipment such as Skype, smartphones, printers, computers, it is real.

In response to the above “traditional” teleworking modalities, nowadays a more advanced option of telecommuting has appeared, called *cross boarders* telecommuting or long-distance telecommuting (Mokhtarian, 1991) where the employee needs to work overseas from a totally different country:

1. **Telecommuting from a country where the employer already has staff:** an employee who used to work at central office needs to move abroad for various reasons such as personal, family or health. In that case, the employer comes to an agreement with the employee to keep the job and telecommute from a foreign country, where the employer has already staff working. If the employer meets all the bureaucratic prerequisites for registering the new staff in the new country, the telecommuter will be able to be paid legally.
2. **Telecommuting from a new country:** an employee asks the employer to move and work for any reason to a foreign country, where in opposition to the previous case, the employer is not registered and still does not work there. It could be also a case where a multinational organization intentionally hires a foreign telecommuter to start developing the market, even if the organization is not yet registered in that country.
3. **Mandatory overseas telecommuting to save rent:** an organization usually multinational needs to close a smaller or less profitable foreign office to make savings from rentals and therefore asks its existing employees in country to work from home.
4. **International telecommuting policy:** an organization, usually multinational wants to set some rules that would apply to all employees in all countries to build

its structure and cross-border consistency. Therefore, a regional or global HR policy is issued to set the work-from-home arrangements (Dowling, 2013).

In general teleworking-telecommuting is a broad field with many aspects that have been studied and more upcoming due to the new facts and circumstances implemented. For example, Anderson et al. (2014), examine the relationship among telework and well-being exploring the individual traits that can moderate this relationship. However, at this point, following the research review on the topic by Bailey and Kurland (2002), a summary of the three most important aspects will be presented-who teleworks, why and what happens when somebody teleworks.

1. **Profile of the teleworker:** The answer to this question is not straightforward, as the estimation of teleworking population may vary due to the sampling methods and the definition of teleworker that each scholar accepts (Kraut, 1989). The fact that individual teleworkers were considered as a sample for many surveys as the rest of the employees tended to telework infrequently and not considered as a sample, has provided specific insights in the topic. In order to have a common reference, some scholars have tried to identify the characteristics of possible teleworkers: a) the traits of people that would be interested in teleworking b) the predictability factors of the potential teleworkers: nature of job-job suitability (included in the work-related factors) has been considered as one important factor to telework c) the organization culture d) the home/work interface (Baruch & Nicholson, 1997).
2. **Motivation of the teleworker:** While the teleworking-telecommuting approach has appeared as a respond to social issues, in fact scholars try to conduct surveys to understand which are the factors that make people telework and on what frequency. Based on the historical conceptualization of telework, there are supply and push forces that make employees search for alternate workspaces out of the office and employers that accept this modality. Research on factors has been focused among the ability to balance work and family; transportation; demographic characteristics; familiarity with technology; firm size; and role of managers in adoption or diffusion of teleworking along with issues of trust and control (Bailey & Kurland, 2002).
3. **Impact of teleworking:** According to Pinsonneault and Boivert (2001, as cited in Bailey & Kurland, 2002) there are various positive and negative impacts of teleworking such as productivity; organizational loyalty; employee attraction; and

retention; however as explained (Bailey & Kurland, 2002) empirical studies have focused on productivity and job satisfaction without a noticeably clear response.

Bailey and Kurland (2002), conclude that despite the long-standing research in the topic, still the profile, motivation and impact of teleworking remain at a large extent without clear answers. Methodological and definitional challenges along with various researchers' assumptions are considered as factors that constraint research. To begin with frequency factor is not taken into consideration and scholars assume that the teleworker is a full-timer while in practice the majority is occasional teleworkers (a few days per month). As a result, their motivation changes and the argument of commuting or parenting does not seem strong enough as they would repeat more often.

The same applies for the negative aspects such as isolation, loyalty to the firm, evaluation and assessment do not seem strong arguments when referring to infrequent teleworkers. Moreover, more emphasis is basically given to the individual effects of teleworking while the impact on the organization and co-workers is overlooked. Additionally, the length of exercising teleworking modality seems not to be taken into consideration (Bailey & Kurland, 2002). Teleworking-telecommuting is an interesting but also controversial field for scholars due to the different perceptions and effects that can be identified through the implementation of this work practice.

3.5. Teleworking-Telecommuting Perceptions and Effects

The impact of teleworking-telecommuting to the organizations, individuals, and society in general has been a broad field for research. However, according to Forbes⁷, there are a lot of semi-truths on teleworking among them the reduced productivity and increase of work and family balance.

During the past decades, teleworking has been gaining more and more space, with the negotiations at European level concluding on the European Framework Agreement on Telework on 16 July 2002, while on the other side on February 2013 Marisa Meyer CEO of Yahoo has phased out the teleworking policy from the organization as according to the CEO, in order Yahoo to become the absolute best place to work, communication and collaboration would be crucial and that required people to be working side-by-side.

⁷ <https://www.forbes.com/sites/naomicahn/2020/01/22/getting-the-most-out-of-telework/?sh=701ce349293c>

Therefore, office presence has been perceived critical as an empowerment of social exchange. Work from home has been considered as guilty for the results of speed (Wright, 2013).

However, as discussed by Wright (2013) in the Society for Human Resource Management out of 100 rated best workplaces in Fortune, 85 have teleworking programs. At the same time though, other companies like IBM or Bank of America have reduced or eliminated the teleworking scheme. It seems that the reply is not clear on the role of teleworking and its effects as based on the occasion and the era can have various effects⁸.

In general, though, scholars have discussed various effects of teleworking with a positive or negative implication. To begin with, flexibility because of technological developments is the one of the important contributions of teleworking to the organizations. Flexibility in terms of location, time, contracts, and other work arrangements leading to increase of productivity. Flexible work arrangements apart from convenient for the existing employees, can also be attractive for new employees, especially in times when there is a shortage of skilled candidates.

In specific, from an HR perspective, especially in the case of cross-borders teleworking/telecommuting (depending on the case) can be especially useful to retain talented employees who, might need for various reasons to work from a home in a foreign country without being present in a regular office. In that case, by providing employees the opportunity to work from overseas homes has a positive effect on the organization as along with retainment of valued staff, employee's engagement is also increased. Moreover, as the market requests switch from the "traditional" work modalities from 9 to 5, teleworking gives an opportunity to companies to follow and correspond to the trend (Morgan, 2004).

Teleworking can support various groups of people to access work such as women or disabled in continuing working and providing work and life balance. As a result, performance because of the flexibility provided. Nilles (1998, as cited in Kippenberger, 2000) also notes that staff turnover is reduced while there is research that investigate the

⁸ <https://www.nbcnews.com/business/business-news/why-are-big-companies-calling-their-remote-workers-back-office-n787101>

positive connection to the job satisfaction and well-being (Virick et al, 2010; Golden & Veiga, 2005).

Additionally, the reduced energy consumption, the cleaner environment, the lower estate costs are included to the positive aspects. In terms of the teleworker a higher morale and a greater participation in the local community's activities are also highlighted as benefits (Nilles, 1998, as cited in Kippenberger, 2000). Teleworker saves time from commuting, gains more time to be prepared for work and organizes more effectively the work and responds faster to any queries (Golden & Veiga, 2005).

At the same time various drawbacks are attributed to the teleworking modality. The European Foundation for the Improvement of Living and Working Conditions (2010) report mentions that the European Framework for Telework has taken into consideration the negative aspects of teleworking and has tried to deal with the issues below: different working conditions comparing to the office employees, which can lead to discrimination against working time, workplace standards or access to training.

Implementation of health and safety measures along with data protection issues seem difficult to be safeguarded outside the conventional office workspace. Social isolation along with lack of separation among work and family life are also considered as challenges for the organizations. Organization of work and working time are included in the Framework where it is stated that the workload and performance standards should be equivalent with the non-teleworkers.

In terms of health and safety, the Framework refers to the equal treatment of all employees. Organizations are obliged to apply the same health and safety regulations to all employees, including the teleworkers as well. However, in the occasions that this prerequisite is not followed, it remains challenging how to monitor the employer. In some countries, such as Slovenia local law requires check visits to the employees' homes by the Labor Inspectors⁹.

The table below (Figure 3) summarizes the costs and benefits for individuals and organizations as discussed by different scholars (Daniels et al., 2001).

⁹ <https://www.eurofound.europa.eu/publications/report/2010/telework-in-the-european-union>

<p><i>Hypothesized individual benefits</i></p> <ul style="list-style-type: none"> Chance to remain in work despite moving home, becoming ill or taking on family care roles More time for home and family Reduced commuting Greater job autonomy Less disturbance whilst working More flexible working hours <p><i>Hypothesized organizational benefits</i></p> <ul style="list-style-type: none"> Improved productivity Improved employee retention Greater staffing flexibility Reduced office accommodation costs Greater resilience to disruption from extreme weather or earthquakes <p><i>Hypothesized societal benefits</i></p> <ul style="list-style-type: none"> Reduced pollution and urban congestion Provision of employment opportunities for rural areas Increased community stability Increased entrepreneurial activity 	<p><i>Hypothesized individual costs</i></p> <ul style="list-style-type: none"> Fewer chances for development or promotion, and the perception that teleworkers are not valued by their managers Increased conflict between work and home Limited face-to-face contact with colleagues and social isolation Routinization of tasks More time spent working Lower job security Weakened collective representation <p><i>Hypothesized organizational costs</i></p> <ul style="list-style-type: none"> Difficulty supervising and motivating employees Increased selection, training and support costs Difficulty socializing new employees to the organization Costs incurred in developing new planning and performance measures Costs of additional information and telecommunications equipment
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Figure 3: *Hypothesized costs and benefits of teleworking* (Source: Daniels et al., 2001)

3.6. Resource-based Approach of Teleworking

While teleworking-telecommuting has been discussed by various scholars, and the benefits costs have been studied through the years, Illegems and Verbeke (2004) present a resource- based approach of teleworking in large organizations. In that approach both top-down considerations (managerial) and bottom-up demands (individual) are taken into consideration. A new perspective is presented which changes the focus from the individual's adoption of teleworking to the organizations.

In other words, research has been giving emphasis on the direct benefits of teleworking for employees, e.g., time and commuting costs decrease, while the long-term benefits for the organization in terms of resources has been neglected. The figure below depicts the two approaches:

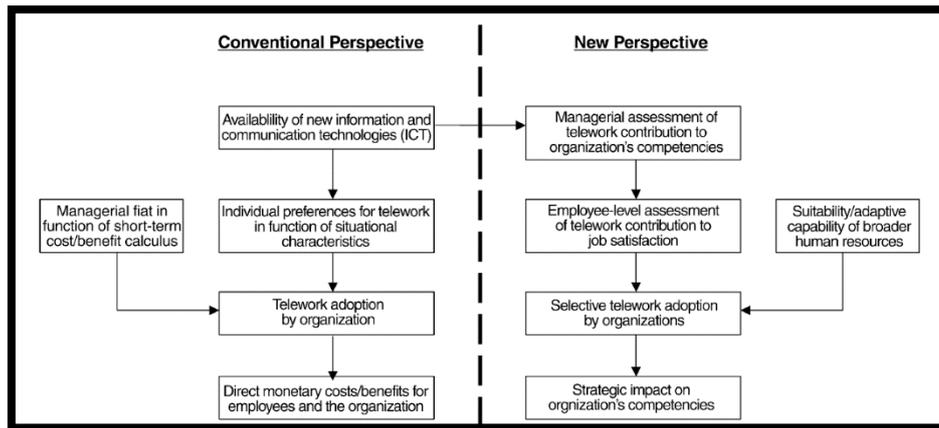


Figure 4: Two perspectives on telework (Source: Illegems & Verbeke, 2004)

Through the new perspective, teleworking adoption is subject to the organization's assessment related to its contribution in Human Resource Management. Teleworking could contribute to attracting; motivating; and retaining skilled employees that are rare and valuable resources for an organization and could impact on the employees' performance. Employee's preference is still taken into consideration but in relation to the job satisfaction and not monetary/time benefits.

At the same time, this approach differentiates the "traditional" adoption of teleworking criteria: selectivity related to job suitability or commuting time. The new perspective implies that selectivity criteria are related to whether teleworking adoption adds a positive impact on different resource aspects and if the adoption by the employee does not negatively affect the job satisfaction rate, which relates to HRM practices followed for teleworking. Emphasis on job satisfaction is applied. Indeed, in the case that job satisfaction is negatively affected by teleworking, then any other expectation on resource-based positive impact will not be able to be materialized.

Surveys conducted by Illegems and Verdeke (2004) have concluded the below:

1. Managers who hold teleworking experience can identify the long-term strategic impact on the organization's resource-based perspective, as new skills are developed in the meantime to the employees. Managers without teleworking experience underestimate the impact on strategic benefits.
2. Teleworking employees refer to the influence of telework on job satisfaction positively, while employees without teleworking experience express a more reserved opinion on job satisfaction.

3. The preceding negative results of the non-adopters employees show that teleworking cannot be used as a motivator factor for all employees as their views are shaped by their perceptions on the HRM practices implemented regarding telework.
4. Telework is a tool that should be implemented in the organizations where the activities performed will benefit in total. Teleworking should not be introduced, if it will be applicable to a restricted number of activities.

3.7. Teleworking facts in EU

The European Framework on telework of 2002 sets a common ground among the different EU countries and its legislations. Some countries though had already in place regulations regarding teleworking. Germany in 1995 has established a collective agreement on that with Deutsche Telekom. Therefore, the framework concluded in 2002 focuses on the emerging interaction and cooperation among the European cross-industry and sectoral social dialogue and is to be implemented in accordance with the Member's state procedures and labor law guidelines.

The difficulty of that framework has been the definition of teleworking as it is a broad term and variations among countries may exist referring to the types of teleworkers criteria and regularity. Also, despite the existence of not employed home based teleworkers, the framework covers the employed teleworkers only. According to the report of European Foundation for the Improvement of Living and Working Conditions (EWSC) the lack of a clear definition on teleworking among countries affects the statistics as they cannot be comparable among countries.

However, comparing the data of surveys of EWCS covering the 27 EU Member States (EU27) along with Norway, conducted in 2000 and of 2005, there has been an increase in the implementation of teleworking in the EU27 (Figure 5).

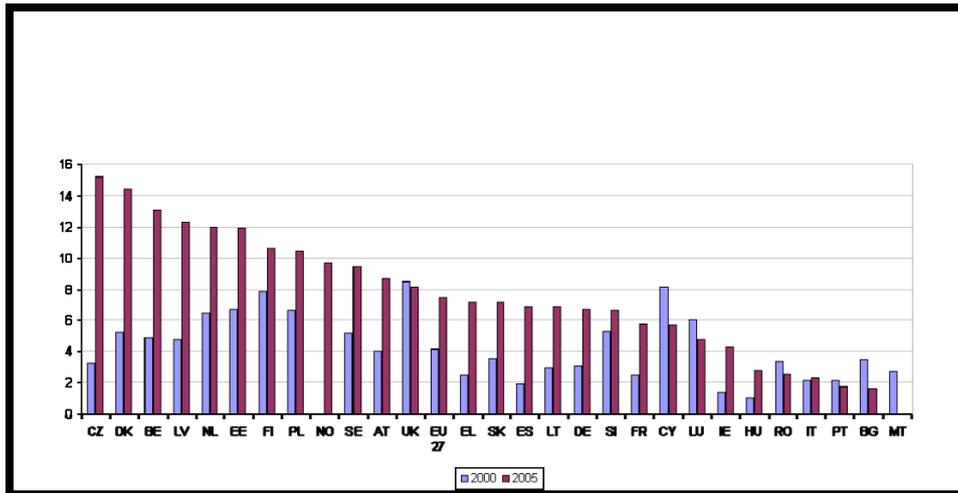


Figure 5: Development of telework in the EU27 and Norway, 2000 and 2005 (%) (Source: EWCS, 2005)

A reasoning for that is the accessibility in telecommunication equipment, internet that people have started gaining both in practical and financial terms. Additionally, the EWSC findings provide another insight on the sectors of economy to be considered as “teleworkable” (Figure 6). Real estate, education and financial oriented employees use teleworking more than other professions. Employees with higher academic qualifications are more likely to telework.

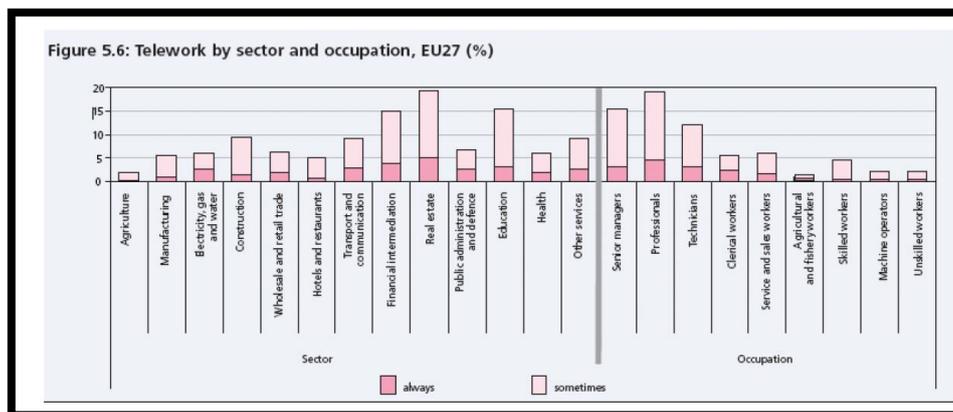


Figure 6: Level of telework in the EU27, by sector and occupation (%) (Source: EWCS, 2005)

An important aspect that also affects the level of telework implementation refers to the EU telework Framework and the creation of a “hard” or “soft” law with the EU member state. Hard law refers to regulations, directives, and decisions while soft law measures include guidelines, declarations and opinions are not considered binding on those to whom they are addressed. Figure 7 depicts the forms of

implementing telework agreement in various countries. Countries in blue implement teleworking through national legislation, while the ones in red implementing through collective agreement. Countries in green implement through soft law mechanisms, however it is important to be mentioned that secondary and supplementary channels of implementation can exist as well in some countries. Autonomous implementation processes refer to self-regulatory practices without third parties involvement, while heteronomous refer to the intervention of the state¹⁰.

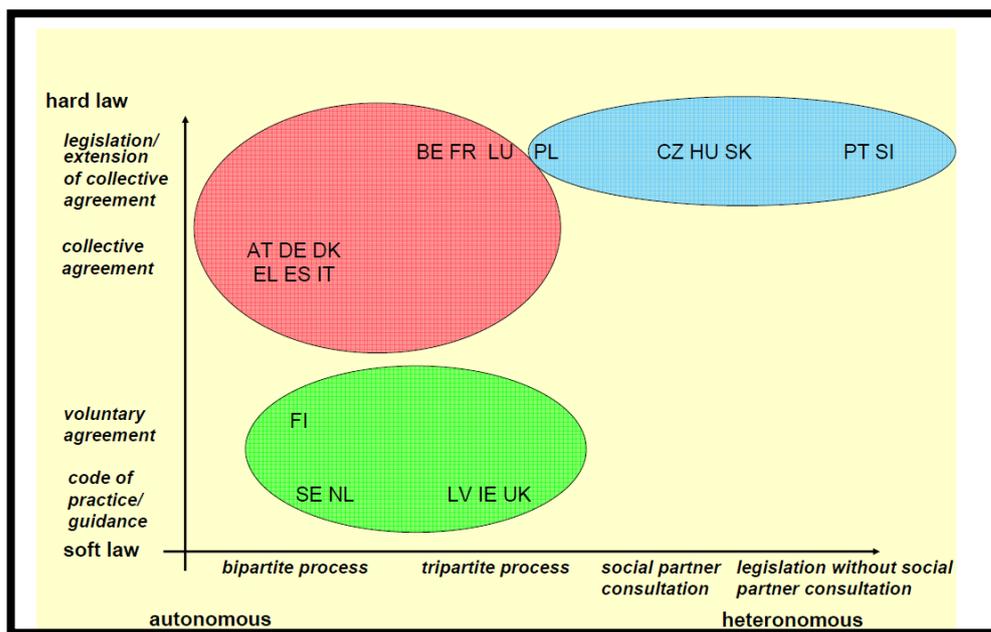


Figure 7: Forms of implementing telework agreement, by hard/soft law and autonomous/heteronomous scale (Source: EWCS, 2005)

Teleworking has been introduced in the European Union as a tool to modernize work organization, improve people's work-life balance and make them gain autonomy, both in public and private sector. It is a rather new phenomenon which basically has not been used at a full time until very recently and has viewed positively by the governments, employees, and unions with a clear acknowledgement of the challenges. However, the latest health developments with the outbreak of the pandemic, that will be analyzed further to the following chapter, have affected, and changed the working terms. While previously teleworking has been treated as an option for organizations and employees,

¹⁰ <https://www.eurofound.europa.eu/publications/report/2010/telework-in-the-european-union>

nowadays it has been transformed at a necessity, will be effective in keeping employees safe while ensuring the continuation of delivery of critical services.

Eurofound (2020) estimates that approximately 40 % of current EU employees are teleworking fulltime while before the pandemic only 15% of EU employees had ever teleworked. The necessity of teleworking in job preserving jobs and production is highlighted by the EU Commission in the current on the communication on 2020 country-specific recommendations¹¹.

Additionally, according to the Joint Research Centre (JRC) report “Teleworkability and the COVID-19 crisis: a new digital divide?”, it is mentioned that the pandemic has increased the tasks that could be conducted remotely in comparison with the pre-outbreak period of prevalence of teleworking.

Teleworking, especially in the crisis time, still must respond to various challenges especially the division among the “white-collars” whose job is teleworkable and the “blue-collars” with limited capacity to telework, to avoid spatial and social separation among classes and ensure solidarity. In addition, criticality and “essentiality” of occupation has kept almost two thirds of the employees connected with their workplaces with little or no teleworking capacity during the crisis in sectors of health and food provision (Sostero et al., 2020).

The pandemic has shifted the working routines and organizations are putting their efforts to correspond to the new trends and challenges. Teleworking has been transferred from margin to the center. Organizations seek not only to remain sustainable but also to support employees by minimizing the risks and introducing new approaches, when feasible.

Hence, it is crucial for the relevant parties to understand the frame of a crisis, to identify the affected stakeholders and the implications caused to the workplace. Only in this way, organizations’ leaders will manage to form a strategic crisis management action plan to survive and thrive through crisis, to build resilience and to develop a skillful environment of people able to tackle this testing nature of the Covid-19 pandemic.

¹¹ https://ec.europa.eu/jrc/sites/jrcsh/files/jrc120945_policy_brief_-_covid_and_telework_final.pdf

4. Crisis

4.1. Definition of Crisis

A crisis in general can be defined as an unwelcome event that causes changes that will have a negative effect on people (Lerbinger, 2012). Specifically, a crisis can be classified at different levels. Vigh (2008), describes an *individual* crisis as a specific period in a person's life where the individual is challenged negatively and faces difficulties in managing external forces and decision making while Lerbinger (2012) defines various characteristics that compose an *organizational* crisis. Any event occurring as sudden, undesired, unpredictable, ambiguous, with high level of impact that breaks normality and interrupts set objectives, challenges the organization's survival, causes stress, and needs quick actions and decisions to be made is considered an organizational crisis. A crisis is also defined by the location such as: *workplace* (e.g industrial accidents, Claus, 2011) and *non-work-related* dangers (e.g illness, road accidents, medical emergencies) (Druckman, et al.,2012), *regional* dangers: pandemics as SARS, MERS, (Tan & Enderwick, 2006) natural disasters (Merlot & De Cieri, 2011).

Other aspects of a crisis can be an *economic* or a *health*. An *economic* crisis is a long-term economic state that is characterized by slow growth in economic activity, rising unemployment, low prices, low levels of trade and investment. The economic crisis faced in 1930's was called the Great Depression. The global and financial crisis of 2008 has been several times more severe as manifested not only in financial but also in the real sectors of economy (Ngowi, 2013). A *health* crisis or *public health* crisis is a serious situation that can affect human in one or more geographic areas or even global and can be result from a disease, industrial processes, or poor policy. The impacts of a health crisis can be on the community health, loss of life and on the economy¹².

However, a pandemic is an epidemic of an infectious disease, spread across a large region or global. In human history there were serious pandemics, Black Death was the deadliest recorded that killed estimated 75–200 million people in the 14th century. Spanish flu was another deadly influenza pandemic that infected 500 million people (from 1918-1920) with 17-50 million deaths. Recent pandemics are HIV with estimated 35

¹² https://en.wikipedia.org/wiki/Health_crisis

million deaths since was first identified and Covid-19 that humanity is facing now and constitutes the main issue of this thesis.

4.2. Covid-19 Pandemic

“The coronavirus Covid-19 pandemic is the defining global health crisis of our time and the greatest challenge we have faced since World War Two”. However, it is not just a health crisis it’s an un-precedent socio-economic crisis and it will create social, economic and political effects that will leave deep and longstanding scars¹³. The virus started from Wuhan in China in December 2019 and have spread all over the world except Antarctica. The global situation now (10th of November 2020) is 51,514,527 confirmed cases, 1,273,424 deaths (Figure 8), reported by the World Health Organization (WHO).

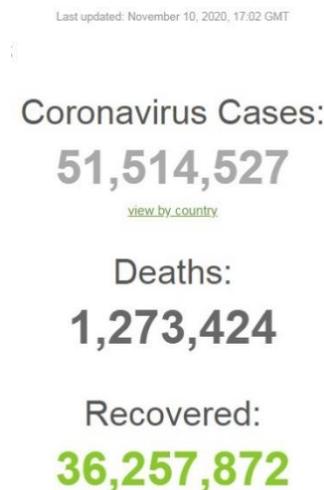


Figure 8: Global Covid-19 Situation (Source: <https://www.worldometers.info/coronavirus/>)

The first comprehensive package of guidance documents for countries published by WHO on 12 January 2020, covering topics about infection prevention and control, laboratory testing, national capacities review tool, risk communication and community engagement, Disease Commodity Package (v1 and v2), travel advice, clinical management and surveillance case definitions¹⁴. On January 30th, 2020, WHO declared coronavirus outbreak a Public Health Emergency of International Concern (PHEIC), WHO's the highest level of alarm and characterized as a pandemic on 11th of March.

¹³ <https://www.undp.org/content/undp/en/home/coronavirus.html>

¹⁴ <https://Covid19.who.int/>

Every country had to detect, test, treat, isolate, trace, and mobilize their people in the response to fight this situation¹⁵.

Greece had the first confirmed case on 26 February 2020 and the government decided a general lockdown and after a week announced restrictions on all non-essential movement throughout the country. After a 42-days lockdown, on 4th May Greece began to gradually lift restrictions on movement and to restart business activity¹⁶. Today Greece measures 60,570 cases, 866 deaths and 2,384 new cases (Figure 9) and is facing a second lockdown (10th of November 2020)¹⁷.



Figure 9: Greece Covid-19 (Source: <https://www.worldometers.info/coronavirus/country/greece/>)

Recent human infectious diseases like Ebola, bird flu, Middle East respiratory syndrome (Mers), Rift Valley fever, Sars, West Nile and Zika virus, all cross from animals to humans. Live animal markets (like in Wuhan) and illegal global animal trade must end as 75% of all emerging infectious diseases come from wildlife. Also, other environmental impacts like Australia fires, heat records are a small impact of human acts.

The Covid-19 crisis is an opportunity for change, is the biggest economic impact of any other disease till today. To prevent a future global pandemic, humanity must act in creating a nature positive and carbon neutral world, in securing a green economic recovery¹⁸, as the implications of a pandemic, apart from the aspect of survival, are

¹⁵ <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/interactive-timeline#event-0>

¹⁶ https://en.wikipedia.org/wiki/COVID-19_pandemic_in_Greece

¹⁷ <https://www.worldometers.info/coronavirus/country/greece/>

¹⁸ <https://www.theguardian.com/world/2020/mar/25/coronavirus-nature-is-sending-us-a-message-says-un-environment-chief#maincontent> , <https://medium.com/@WWF/to-prevent-the-next-pandemic-we-must-transform-our-relationship-with-nature-c42ce9dffc62>, <https://www.forbes.com/sites/gilpress/2020/07/15/the-future-of-work-post-Covid-19/>

primarily affecting the economy and the workplaces with a direct impact on people's standard of living.

4.3. Implications of Covid-19 to the Workplaces

The new reality of Covid-19 pandemic has changed the workplace reality. Uncertainty has spread out and organizations have been called to fight for their survival and vitality as the new reality has changed the whole work function in operating in terms of physical, practical, and socio-psychological aspects (Carnevale & Hatak, 2020).

According to The International Labour Organization (ILO) 400 million full-time jobs could be lost during the second quarter of 2020 (Europe and Central Asia 13.9%)¹⁹. The Great Lockdown is the worst recession since the Great Depression, global growth in 2020 will fall to -3%, according to World Economic Outlook, and far worse than the Global Financial Crisis. “The cumulative loss to global GDP over 2020 and 2021 from the pandemic crisis could be around 9 trillion dollars” (Gopinath, 2020).

Employees around the world have been impacted at an individual level under the following scenarios: a) shift to work from home modality b) distinction of employees on “essential” and “life-sustaining” c) Furlough or layoffs. At the same time, at an organizational level the continuous lockdowns and changes on policies will have an impact on organizations that is likely to change them fundamentally some in a positive and some in a negative way.

However, opportunities may also occur as usual during crisis times (Kniffin et al., 2020). As a result, these new challenges and undiscovered areas affect the HRM that strives to support employees and organizations to adapt to the new working “rules” to all type of workers. The covid-19 challenges and changes are traced in the areas of working status and practices; health and wellbeing; unemployment; and inequality; virtual settings; and new working reality.

¹⁹ https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_749399.pdf

4.3.1. Emergent Changes for workers: inequality and unemployment

Covid-19 has impacted on psychological, social, economic, and health-related issues of the individuals, especially the virtual or remote workers, the ones considered as “essential” and the others laid off temporarily or permanently (Kniffin et al., 2020). According to Pew Research Center analysis of federal government data in the U.S., during the Covid-19 downturn, caused about 30 million American workers to file unemployment insurance claims, 90% of the decrease in employment – or 2.6 million of the total loss of 2.9 million between February and March – arose from positions that could not be teleworked²⁰.

As a result of the pandemic many organizations have been led to closure (permanent or temporary) and people at unemployment status. According to Jahoda (1988, as cited in Kniffin et al., 2020), the unemployment status has a greater impact on the person’s well-being directly and indirectly (e.g., income, socialization, status, sharing of common goals). What is remarkably interesting, however is that unemployment affects apart from the unemployed, the employed as well since the levels of commitment in downsizing scenarios, job involvement will decrease among the “survivors” while stress will increase (Trevor & Nyberg, 2008).

Finally, inequality rates are expected to increase as based on the findings of the financial crisis of 2018 the most welfare individuals gained more influence over ideology and politics, advocated for tax reduction for the rich and reduced welfare for the least privileged (Wisman, 2013). This behavior is expected to contribute negatively to the workplace observing trends of burnout, absenteeism, turnover, bullying, decreased job centrality (Bapuji et al., 2020). It is also expected that due to the job insecurity during the pandemic period, low paid employees will present behaviors of bigger risk-taking and presenteeism that could result in bigger health risks for spread out of the disease while social and political instability might be observed (Kniffin et al., 2020).

²⁰ <https://www.pewresearch.org/fact-tank/2020/05/06/telework-may-save-u-s-jobs-in-Covid-19-downturn-especially-among-college-graduates/>

4.3.2. Health and well-being social distancing and loneliness

Support of the health and well-being of employees has been one of the priorities of the organizations due to the pandemic as the Covid-19 has affected differently the demands and resources of the jobs across and within the organizations (Kniffin et al, 2020). For example, employees have been called to deal with family and work balance which becomes harder due to the disability of implementation of the pre-Covid childcare policies and facilities. Remote work blurs the roles of employees and in combination with the increased levels of autonomy and self-responsibility, employees' well-being and productivity can be easily affected (Carnevale & Hatak, 2020).

On some other occasions, the working conditions of employees have deteriorated increasing the risk of job burnout for employees, while studies on Hurricane Katrina indicated that mental consequences (e.g. stress and depression symptoms) can remain for time after the crisis (Obradovich et al., 2018). Apart from the stress effects, presenteeism (i.e. attending work while being ill) (John, 2010) and addiction behaviors should not be neglected. Prior research (Vlahov et al., 2002) has discussed the psychological effects after a disaster/terrorist attack (11th of September 2001) and has demonstrated the shift in consumption of addictive products (e.g., cigarettes, alcohol).

Similarly, the Covid-19 era is a highly traumatic period including unemployed or work from home individuals. On Brooks et al. (2020), review is presented the psychological impact from quarantine as people reported anxiety, anger, and post-traumatic stress symptoms. Quarantine duration, infection fears, frustration, boredom, inadequate supplies, inadequate information, financial loss, and stigma are the stressor factors that have been reported. However, if quarantine is considered necessary, information about protocols and ensuring sufficient supplies to the public can be helpful (Brooks et al., 2020).

Kniffin et al., (2020) also discussed the negative effects of social distancing on employees, especially the Work from Home (WFH). It has been proved that quality social connections have a positive effect on people. Informal chats are important for mental and physical health while handshakes, which are now not allowed strengthen the social connection. According to Ozelik and Barsade (2018), workplace loneliness relates to poor performance. Additionally, employees are disengaged by the organization and cannot connect with its values and culture. Based on the literature review and the relevant HRM theory, employees' satisfaction, engagement, and well-being is affected by the P-

E fit (personal environment fit) as they tend to be attracted and selected by organizations with environments that depict their own world. Therefore, experiences of misfit are likely to occur to the employees due to the elimination of association with other employees (Carnevale & Hatak, 2020).

Pandemic has unexpectedly shifted the existing working routines but also accelerated other forms which have slowly processed such as virtual environments or migration to work online. In fact, the acceleration of the digitalization process has introduced technology and platform-based work environments raising the need on employee's digital literacy so that people are able to access their jobs (Sheppard, 2020). In specific, the pandemic has shifted the Work from Home modality (WFH) from an employee preference into a forced "choice" (Kniffin et al, 2020). Managers must take fast decisions about who should work from home, how the transition to the digital space will take place and which priorities must be set (Caligiuri et al., 2020).

4.3.3. Emergency Changes in work practices: Work from Home and new work reality

Connectivity and technology developments have contributed to the expansion of remote work trends. Remote works refers to work conducted in any location away from office, WFH is a subcategory of it. However, the lockdowns and closure of other facilities have made WFH the only solution for all. In that occasions the identification of working spaces at home and the transition from work to non-work domain while being at home are challenging for employees.

According to two surveys of American workers conducted in early April and May 2020, Brynjolfsson et al., found that of those employed pre-Covid-19, about half are now working from home, including 35.2% who report they were commuting and recently switched to remote working and a 10.1% report being laid-off or furloughed since the start of Covid-19²¹.

At the same time WFH seems to be challenging as some employers in pre-Covid period have been reluctant in adopting the WFH due to their perception of losing control of employees. In such cases, it is expected that WFH will be accompanied by other forms of surveillance. During the pre-Covid period, some employers had implemented technologies to monitor employees such as sociometric sensors (Bhave et al., 2020) while

²¹https://www.nber.org/system/files/working_papers/w27344/w27344.pdf

during the Covid-19 period the “walk around” monitor has been replaced by the videoconferences for virtual observations.

However, the increase of videoconferences affects the level of stress of employees and can also be considered as invasion to privacy life. Scholars also mention that remote and automated monitoring increases the level of decision making in the top managers in the absence of countervailing action but can decrease the level of creativity and motivation in the low-level units of employees (Nell et al., 2020).

A new working reality takes place in HSBC in Hong Kong. HSBC has separated the 30,000 staff among: 1) "*Flexible home workers*" that would work primarily remotely (up to four days/week from home); 2) "*Flexible office workers*" that would work primarily in the office (up to two days/week from home); 3) *Permanently office based*. Those that choose to work two or more days a week from home for at least one year will receive 2,500 Hong Kong dollars (\$322) for remote working purchases.

Deutsche Bank announced a "hybrid" model called for a 5% "privilege" tax, on staff that will choose to work from home. The Dutch Finance Institution pushed companies by paying staff 2 euros extra per day to cover working-from-home expenses (coffee, toilet paper, energy bills)²².

The “Work From Home” life will be financial for organizations but there are decisions to be made, and will probably affect its success, about how long employees will work from home (Twitter, say “forever”), whether a “hybrid” working environment is effective, and whether an office space serving employee’s needs (Gavett, 2020).

China has already moved one million people back to work and the real estate company from Amsterdam, Cushman & Wakefield, developed the “Six Feet Office”. It’s a design of an office space to encourage better hygiene and social distancing through properly spaced desks, visual signals, clockwise walking and beacons to track employee’s movements. Installing high-end air filtration systems will be mandatory for companies to promote health and wellbeing (Wilson, 2020; Posner & Heichler, 2020).

²² <https://www.businessinsider.com/working-from-home-hsbc-hong-kong-remote-office-2020-11>

4.3.4. Virtual settings: virtual teamwork, management and leadership

The transition to virtual world has led to the increase of the concept of virtual teams in its appliance from a range of fewer than 50% of organizations on 2000 over than of 65% in 2008. Virtual teams share advantages and disadvantages.

On the one hand, they deprive from time and space limitations giving the opportunity to include experts from every place with cost savings due to reduced commute costs while staffing flexibility is increased (Kniffin et al., 2020). It has also been noticed that they encourage the assistance seeking and giving approach. People are more willing to open and seek for help and others to provide even more quality help in virtual settings, maintaining their privacy (Cleavenger & Munyon, 2014), reducing the stigmatization (Ben-Porath, 2002).

On the other hand, team cohesion, satisfaction, trust, cooperative behavior, social control, and commitment to teamwork are challenged during the virtual teamwork which accordingly impact the team performance (Hoch & Kozlowski, 2014) as virtual teams lack in communication intimacy compared to the face-to-face (Gibson & Gibs, 2006).

Therefore, building on auxiliary (apart from digital) skills such as collaboration, openness to new ideas, problem solving (Shepperd, 2020) and fostering a psychological safe communication climate is a response to formalization of team processes, message clarification and other difficulties occurring from virtual teamwork (Gibson & Gibs, 2006).

In that context the role of virtual leadership and management is especially important as the successful implementation of all the new work practices depends on them. The role of leaders is to decide on crucial issues affecting their employees (Kniffin et al, 2020) and influence employees to achieve the organizational goals.

While in traditional settings the influence can derive from other environments, such as employees without authority (informal leadership), in virtual settings and teleworking modality the role of formal leader becomes fundamental as a bridge among the teleworkers and the organizational goal. As a result of that function, the emergent leadership has been transformed to “virtual” or “e-leadership” (Kniffin et al., 2020; Contreras et al., 2020) to respond to the needs.

Even though both management and leadership roles are needed during teleworking (Nayani et al., 2018), implementing management functions virtually seems

more feasible and can improve effectiveness compared with implementing leadership through electronic devices (Contreras et al, 2020) especially when the adoption of traditional leadership practices to virtual settings is considered challenging (Pulley & Sessa, 2001). For example, leaders are tested every time they have to handle systemic shocks and despite that, they need to keep on working on their vision. Managers on the contrary face challenges in terms of supervision and development of their teams from distance (Kniffin et al., 2020).

All the above pandemic changes and impacts affect and are affected by the demographic, individual characteristics, and organizational standards. That characteristics interact with other factors such as health or socio-economic and moderate the relations. Diversity, equity, inclusivity and organizational pre-Covid concepts, presented below, might need to be amended to the new situation (Kniffin et al., 2020).

- ***Demographic characteristics:*** Age, race, ethnicity, sex, and family status are factors affecting the Covid-19 risks. For example, women workers are facing a severe impact due to the pandemic as they work to the worst affected economic sectors (accommodation, food, sales, and manufacturing) are globally almost 510 million (40% of all employed women). Domestic work and health and social care work sectors are mostly working women and they are at greater risk of losing their income, infection and transmission and are less likely to have social protection²³. Additionally, single mothers and families that cannot combine work and children caring. School closures inferred children caring at home and education, excluding grandparents informal care due to high spread of the virus to this age and the high mortality rate. Mothers will find it difficult to achieve work targets together with childcare during the crisis worsen the gender wage gap. Flexible work arrangements and telecommuting also with changes in social norms and role models will push social norms towards more equality (Alon et al., 2020).
- ***Individual differences:*** Covid-19 social distancing and WFH effects differ on individuals according to their personality traits. Consciousness

²³ https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_749399.pdf , https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_749398/lang--en/index.htm

relates to work benefits while unpredictability with the decrease of consciousness benefits as it increases job complexity. At the same time, segmentors and integrators are expected to perceive differently the WFH, with the segmentors enjoying and performing better when there is clear distinction among work and non-work (Rothbard et al., 2005).

- **Organizational Forms:** It seems that in the Covid-19 context Hofstede's (1984) cultural dimensions are very relative, especially the dimension of tightness-looseness as it explains how groups react in critical life moments and how they develop norms and organizational cultures (Harrington & Gelfald, 2014). Transferring this idea to the workplace, the challenge is how organizations will balance among tightness and looseness approaches to bind employees from one side, and to give them autonomy on the other side. Based on the tightness or looseness of the organization, other characteristics will be affected such as team creativity, innovation or health and safety regulations.

Organizations and HR practitioners need to demonstrate preparedness to handle the challenges described in the preceding narrative. It is vital that the role of HR during the crisis is active and supportive, providing its expertise and experience to navigate through demanding times.

4.4. The role of HR in crisis

During a crisis period like the ones mentioned previously, HR must adjust management planning ensuring that employees' needs and organizations' role deal with it. Planning and training for crisis management are consider utmost importance in HR's role. Organization must be prepared, and personnel must be trained to "ensure effective disaster planning". The amount of damage and the fast return in organization's previous position are vital parts in business sustainability. Through the crisis management process (Figure 10) the situation has first to be identified, plans need to be prepared by developing specific actions to prevent further loss and help organization to recover. Learning from the experience and redesigning the process for more effective practices for the future constitute an obligation for organization's sustainability (Athamneh, 2018).

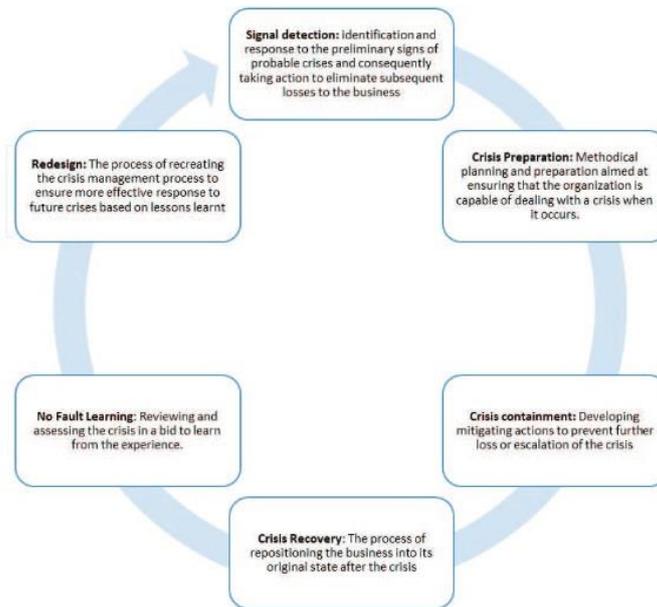


Figure 10: Crisis Management Process (Athamneh, 2018)

The role of HR in crisis management is to plan how to prevent, reduce impact and recover from the crisis. Employees are playing an essential role in crisis management process and the development of policies and procedures must ensure that their rights and needs are included in the management plan. The information that is provided by the HR about the role of employees is vital and the training methods must enhance preparedness using the right knowledge and skills to handle a potential crisis.

Training can be focused on: *threat and risk assessment* on preventing potential crises, *business continuity planning* to ensure organization's recovery, *disaster recovery* on responding against a disaster, handle trauma and survive from the crisis, *business impact analysis* by using effective strategies to improve organization's recovery process, *simulation exercises* on testing employees understanding and interpretation ability and *survival tactics* on training employees with survival techniques by promoting their physical and psychological well-being (Athamneh, 2018).

Additionally, leaders are essential part of the crisis management. They are developing learning codes through past experiences and as crises are rare phenomena, the opportunities to grow Crisis Leadership skills are limited. Learning and development is the base for crisis leadership, a competency-based approach through identifying the critical tasks and activities, the competencies required, and the understanding of the conditions for implementing the crisis management strategy. Researchers identified five

phases of a business crisis: 1) *signal detection*; 2) *preparation and prevention*; 3) *damage containment*; 4) *recovery*; and 5) *learning* (Figure 11).

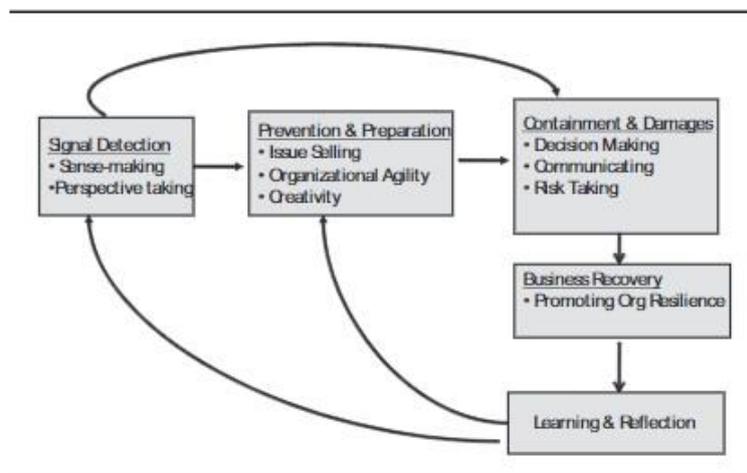


Figure 11: *Phases of Leadership Competencies in Times of Crisis* (Wooten & James, 2008)

HRD professionals need to work on planning the prevention of a crisis and prepare scenarios about the functions of their staff, together with training programs for the managers about the skills needed through the crisis's damage control phase. Identifying the skillful managers that can remain calm under pressure circumstances and create a crisis management team is especially important for HRD.

During the moment of a crisis, it is very difficult for leaders to create new knowledge especially for unknown territories like a pandemic. Training and development programs have to be aligned with organization's recovery strategy in order to rebuild management's practices and policies. Leadership during a crisis can be distinguished by the speed of decisions making and actions taken, and the publicity and scrutiny that follows the organization and its leaders (Wooten & James, 2008).

In specific, in the case of an economic crisis, the role of HRM becomes more crucial as has to manage challenges both at strategic and operational levels in different ways as it runs in various environments-economic-political and societal. The increase in unemployment rates creates a high amount of job seekers providing HR with a big pool of applicants, although there is a decrease in labour demand (staffing). Also, the increased rate of uncertainty accordingly affects the human resource architecture that comes to give extra value to employee flexibility (employee relations). HR needs not only to respond to all challenges but also to find solutions to problems in line with the long-term

organization's goals, retain employees' trust and motivation while reducing expenses (Onder & Dogan, 2013).

Employees during crisis tend to become more motivated and productive to keep their jobs, however, their commitment reduces gradually along with their trust and loyalty when they experience a reduction of resources. Employees also feel stressed and anxious and tend to explore other work opportunities, if the current employer does not react quick enough to retain them (Verma, 2012).

Therefore, when it comes to HRM a strategic decision needs to be taken on the most suitable approach to face the crisis:

- Reducing Resources Strategy: This approach includes resources downsizing or reducing the workforce. In such a situation the role of HRM is to take the right decisions and work in both dimensions: not only to respond to the crisis but also to meet the overall organization's goals. Reduction of compensation and benefits (e.g., wage cut), dismissals, flexible working hours, part-time, contract termination or not an extension, outsourcing activities, retirement incentives, leaves without pay, training budget reduction are some of the options implemented at that scenario with the risk of losing valuable employees who would choose a workplace that would value their work (Stefanescu & Darabaneanu, 2011).
- Increasing Resources Strategy: This approach includes an increase of resources to retain high performers, attract new workforces and increase efficiency. Crisis in that case is seen as an opportunity. HRM implements the options below to achieve its goals: keep or expand workforces, increase of training, increase of benefits and compensation (Onder & Dogan, 2013).
- Organizational Identification Increase Strategy: This approach includes the increase of organizational identification and includes an increase in job satisfaction and commitment (Onder & Dogan, 2013).

According to McKinsey & Company analysis of company performance during and after the last financial crisis showed that those organizations that took steps to improve their resiliency early continued to outperform their peers for at least a decade (Figure 12).

Resilient companies did better at the outset of the downturn and afterward.

Total returns to shareholders by company type,¹ index (2007 = 100)

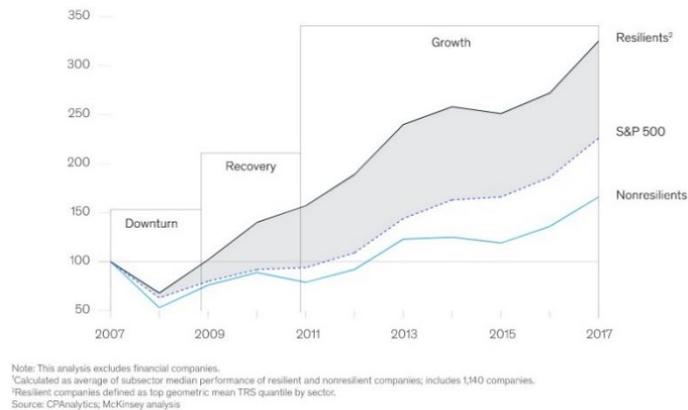


Figure 12: Company Performance (Source: <https://www.mckinsey.com/featured-insights/coronavirus-leading-through-the-crisis/charting-the-path-to-the-next-normal/companies-that-take-steps-to-improve-resiliency-now-could-see-benefits-for-years>)

Like other crisis situations, the pandemic has highlighted the essential role of the HRM for the organizations as it had to tackle challenges at different levels. For example, in the case of Georgian companies, they were challenged by the image of corporate brand versus the communicated brand resulting in some cases positive in other negative effect on the relations among employees and managers. Organizational culture along with values have also been under discussion as in some cases the organizations did not demonstrate in practice the values towards the employees, taking no responsibility for them.

The list of organizational challenges should include the following:

1) *crisis management and uncertainty*; 2) *business closure and suspension of operations*; 3) *regulations and imposed fines*; 4) *financial difficulties*; 5) *need for flexibility* ; 6) *move to digitalization era*. From the perspective of employees' feelings of stress and fear, unemployment, adaptability to remote work, shift to unpaid leave status and lack of knowledge of online tools have been reported.

All the challenges, impact the HRM that has been called to handle the emotions of panic and fear of the employees, try to find ways to retain and dismiss as less staff, as possible, to monitor the shift to remote work modalities, to cover the gap of lack of knowledge in technologies and crisis management skills, and to implement the safety regulations. At the same time, the financial limitations of the organizations have an impact on employees' development with organizations trying to save costs by reducing training,

coaching, and consulting opportunities with an effect on employees' motivation, well-being and accordingly on HRM scope of work.

Some organizations have managed to adjust to the virtual era by hosting on-line speeches while others and in particular HR experts have denied conducting on-line trainings. The example of Georgia is only an indication of arising challenges at different levels and the interconnection of them. HRM's focus all over the world is to ensure the employees' health and safety along with their effectiveness that would safeguard the functionality-survival of the organization (Gigauri, 2020).

Therefore, various measures/practices have been implemented applying to different HRM functions to manage the pandemic that refer to tackling not only the health but also economic crisis. The choice and implementation of the practices below refer to the covid-19 status of each country where the organization is in accordance with each government's guidelines.

- In terms of *staffing* function, freezing of recruitments, redeployments, redundancies, furlough, retirement plans, e-interviews have been options.
- *Training and Development* have been facilitated through e-trainings, unpaid or special leaves for parents and covid-19 patients while the *rewards* have been handled with freezing or delaying salary wages, cut wages, flexibility of working hours.
- In terms of *employee relations*, priority has been given to health & safety in workplace: provision of PPE, staggered shifts/breaks, fewer or e-meetings, temperature checking and testing, reduced, job rotation, team fixation, working back-to-back, screen barriers telecommuting-WFH, travel policies, provision of PSS support (CIPD, 2020).²⁴

In addition to the above, the role of HR during that times includes the need of provision of strong and reliable ground data, expansion of the professional network, promotion of innovation, ensuring of employees' continued learning, facilitation of regular meetings to understand the challenges and creation of a platform to celebrate with employees all the achievements, as support to the leaders and avoid or limit the destabilization of the organizations (Dirani et al., 2020).

²⁴ <https://www.cipd.co.uk/knowledge/work/trends/working-post-pandemic>

4.5. A new working reality

Stimulation of economy and employment, support enterprises, jobs and incomes, protection of workers in the workplace and relying on social dialogue for solutions are the four key pillars according to the international labour standards, ILO (Figure 13) in tackling the Covid-19 crisis:



Figure 13: Key Pillars (Source: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_749399.pdf)

In that context, Wang et al., (2020), identified four innovative strategies to proactively tackle Covid-19 crisis:

1. *the responsive*: firms with physical contact can be transferred to online marketing channels;
2. *the collective*: highly affected firms may need to develop collaborations for new businesses with other firms;
3. *the proactive*: less affected firms may develop new marketing strategies to serve the needs of the existing customers;
4. *the alternative*: for less affected firms can follow a partnership strategy through collaboration with others (Wang et al., 2020).

Returning to work arises new possibilities as people have been motivated to achieve their organizations' goals and work contributions to fulfill a purpose or a mission. Organizations must strengthen the link between *belonging* and organizational performance to create a deeper connection and a visible impact to the organization and

society. *Well-being* is a top priority for organizations that design the “return to work stage” as many workers had experience burnout, exhaustion and stress in balancing working and personal demands that worsen by Covid-19 crisis. Organizations must understand their *workforce* by learning workers attributes, needs, and dimensions (Deloitte, 2020, p.9). In employees’ *selection* process, tolerance for ambiguity, resilience and curiosity will be the most critical cultural agility competencies that need to be more effective during uncertain situations (Caligiuri, et al.2020).

A data-driven approach will help to this direction in the same way that in Covid-19 researchers expand their investigations beyond age to understand the virus. Technology needs to be used by organizations as an *augmentation or collaboration strategy*. Pandemic showed that humans and technology are more powerful together and technology will not replace humans. *Knowledge* is the power and strengthens the organizations connection between workers. By leverage the power of Artificial Intelligence, organizations can build a culture of knowledge (Deloitte, 2020, p.9). A “self-directed knowledge-seeking” can also satisfy the need to learn during the pandemic and companies have to offer an online training to invest into the skill developments of their employees (Caligiuri, et al., 2020).

Developing a *resilience and adaptability* workforce can offer new opportunities to the workers and contribute for a change to the future. Organizations philosophy around *compensation programs* need a human value orientation and consider the principles they serve. Although by taking the power of technology as an advantage to collect insights about their workforce by using the *key questions* to understand the organization’s culture. The *ethical impacts* of business decisions that the organization had to take in the pandemic need to be considered as more than 50% of the workers were not satisfied with the support they received from their employers. *HR has to take a leading role* to help organization recover and thrive over the next years. “Organizations face a choice between returning to a post-Covid world that is simply an enhanced version of yesterday or building one that is a sustainable version of tomorrow” (Deloitte, 2020, p.9).

In that context, Gartner (2020), presents 9 long-term implications of the coronavirus pandemic on the HR function and work:

- **Remote Work:** Nearly half of employees will work remotely, the pre-pandemic percentage was around 30%, with post-pandemic be at 48% (Figure 14). HR must identify new skills that enable effective remote work, including greater digital dexterity, adapt management styles to fit remote team needs, create new

“employee journey maps”, provide flexibility, rethink experience for a remote/mixed workforce. In performance management HR must ask whether and how employee evaluation and goals need to change for remote setups and in recruiting HR must seek for new skills, in new locations, and meet applicants’ expectations for remote work options.

Remote work

What’s happening?

Nearly half of employees will work remotely at least some of the time.

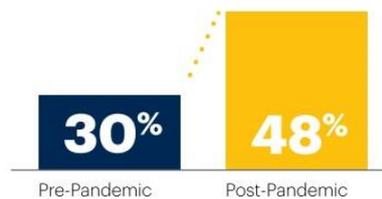


Figure 14: Remote Work (Source: <https://irp-cdn.multiscreensite.com/fa358a09/files/uploaded/gartner-future-of-work-trends-post-Covid-19.pdf>)

- **Employee Data:** passive data collection will be increased by remote work, 16% of employers report passive employee data collection that includes virtual logging/clocking in and out, computer and phone use, e-mail, internal communication, location, or movement (Figure 15). HR must improve technology strategy and management by improving data storage, management and analysis and accelerate policy formulation over ethical and legal data use by the organization and third parties. Through performance management must determine the influence of data in evaluating productivity and performance evaluations, ratings, and rewards, and through talent analytics HR must leverage continuous sentiment tracking to monitor culture and engagement across an increasingly dispersed workforce, driving ethical data collection and use by the organization.

Employee data

What's happening?

Remote work increases passive data collection. Health and safety protocols may require new explicit data collection.



Already 16% of employers report passive employee data collection, including:

- Virtual logging/clocking in and out
- Computer/phone use
- Email/internal communication/chat
- Location or movement

Figure 15: Employee Data (Source: <https://irp-cdn.multiscreensite.com/fa358a09/files/uploaded/gartner-future-of-work-trends-post-Covid-19.pdf>)

- **Employer as Social Safety Net:** Nowadays societal role of employers has grown, including above-market minimum wage, increased parental leave and gender equality. HR must expand the bounds of employee experience, especially to account for personal factors, such as family responsibilities, consider having a chief well-being or mental health officer to advocate for the pandemic-changed needs of employees and tackle new compensation challenges and physical and mental wellbeing benefits (Gartner, 2020).

Accenture Company is providing a program that launched with Thrive Global called “Thriving Minds,” coping strategies for dealing with anxiety, stress, and loneliness for their employees. Eventbrite’s “Modern Health” platform geared to address stress, anxiety, and other mental well-being issues, has seen a “massive uptick” from home-bound employees (Caminiti, 2020). Kohll (2020) also describes five tips to prioritize employees’ well-being:

- 1) *Focus on Mental Health:* call attention to employee assistance programs, mental health apps and offer mindfulness training sessions.
- 2) *Offer Financial Assistance:* use of creative ways to support employees financially e.g., cover the expenses for purchasing lunch and coffee from small businesses to encourage support.
- 3) *Encourage Virtual Workouts:* encourage employees to move, take walks outside, use of free sources like “find yoga” that can be done at home.

- 4) *Host a Gratitude Challenge*: consider of launching a gratitude challenge using an emotional intelligence center to improve employee’s mental and physical health.
 - 5) *Stay Connected*: Schedule “coffee breaks” via virtual casual meetings and catch up with random team members (Kohl, 2020).
- **Contingent workers**: employers use contingent workers to reduce costs, 32% replacing FTE’s and 12% contingent workers replacing illness shortages (Figure 16). HR has to create gig work development plans to onboard and up skill contingent workers, formalize HR processes and management for nontraditional employment models and design systems to evaluate gig workers and include them in team processes, determine whether they will be eligible for the same benefits as full-time peers.

Contingent workers

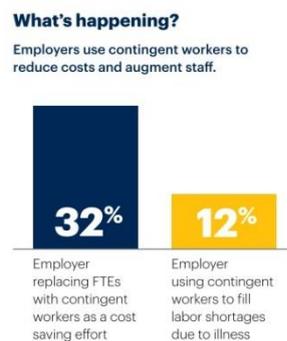


Figure 16: Contingent Workers (Source: <https://irp-cdn.multiscreensite.com/fa358a09/files/uploaded/gartner-future-of-work-trends-post-Covid-19.pdf>)

- **Critical skills**: organizations redefine the skills needed to meet strategic goals, that will no longer equate with roles (Figure 17). HR must motivate employees to develop critical skills that multiply their options, reevaluate which roles need succession plans and bolster the development paths for potential successors, reengineer workforce planning to focus on critical skills versus critical roles and provide greater career development support to employees in critical roles who lack critical skills.

Critical skills

What's happening?

Organizations redefine criticality — the skills needed to meet strategic goals. Those skills will no longer equate with roles.

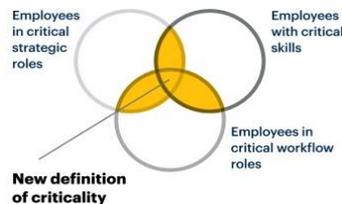


Figure 17: Critical Skills (Source: <https://irp-cdn.multiscreensite.com/fa358a09/files/uploaded/gartner-future-of-work-trends-post-Covid-19.pdf>)

- **(De)Humanizing work:** *By working remotely:* managers must consider what expectations are reasonable for those employees working from home. *By working on-site:* advocating health and safety, adding rewards, hazard pay, childcare, health benefits, safety measures. HR must ensure that leaders develop emotional intelligence and other skills to help employees navigate their expectations. Empathy and performance requirements need to be balanced. Culture of inclusiveness must be fortified to engage workers assigned tasks in the team culture. Employee experience need a holistic view supported by cross-organization partnerships. Benefits must be to the point for each employee, the “one-size fits all” approach may no longer work.
- **Top-tier employer brands:** organizations decisions will define the top-tier employers in the next years as their commitment will be tested now (Figure 18). HR must make partnerships with other organizations to redeploy employees displaced from their jobs due to Covid-19, prepare to articulate the “why and how” of the organization’s decisions in response to the pandemic, urge the organization to balance the financial concerns with the long-term impact on employer brand and support employees despite cost-saving measures, help CEO and board to understand the impact of workforce decisions.

Top-tier employer

What's happening?

Talent decisions made now will define employer brands for years to come. Organizations demonstrating their commitment to employees now will be viewed as top-tier employers.



Figure 18: Top-tier Employer (Source: <https://irp-cdn.multiscreensite.com/fa358a09/files/uploaded/gartner-future-of-work-trends-post-Covid-19.pdf>)

- **Organizational resilience:** Due to the Covid-19 crisis, lean operations created limited flexibility and the process breaks down. HR must evolve modeling of skill needs to quick change, incorporate diversity and inclusion into role design to create flexible work systems for all, design roles, structures, and processes around outcomes to increase responsiveness and flexibility, collect data to support resourcing decisions and define the minimum critical inputs for deciding, provide employees with more varied, adaptive, flexible careers so they acquire valuable cross-functional knowledge and training.
- **Organizational complexity:** Mergers and acquisitions in global may increase as crisis may prompt bailouts. HR function must move to operating models and flexibly deploy assets to solve problems. HR leaders lead integration efforts for talent and other processes, customize performance management for business needs, support reskilling and career development, resources, and platforms to provide visibility into internal positions, harmonize total rewards plans as organizations engage in M&A activity²⁵.

²⁵ <https://irp-cdn.multiscreensite.com/fa358a09/files/uploaded/gartner-future-of-work-trends-post-Covid-19.pdf>

4.6. Response to the crisis

Most scholars, HR experts, leaders and other parties agree that a new working reality is raising that will differ in modalities and approaches. The challenges discussed already are addressed to various levels-organizational-personal-managerial etc. Therefore, a holistic-2 pillar- approach seems to be the response to them: a mixed model of technology and people. In specific, the new reality will be facilitated with the implementation of teleworking function, e-HR and HRIS and a new leadership model.

4.6.1. Teleworking-HRIS

Advances in technology and emerging technologies have already and will continue to affect the workplaces at different levels. However, with the current situation of the pandemic and the necessity of social distancing, technology and its applications are modalities that can support both the organization's functionality and ensure the health and safety of employees, which are the top priorities. Despite the challenges, most employees and businesses have experienced the teleworking function, mostly the WFH, in response to the measures imposed, as a broad scale without borders experiment.

While the gap among teleworkable and non-teleworkable professions remains, the necessity of social distancing will also remain until the vaccinations take place, rendering teleworking the most viable solution. In fact, the teleworking/WFH modality has managed to maintain workforce millions of employees on board, either full-time or short time, that previously without that arrangement would not be feasible.

As *plasticity* of the work organization is more powerful than task context, it means that are easily adapted to the new context. Routine and standardization of tasks is helpful to implement remote work functions. The challenge of social interaction and teamwork seems to be managed, since various online collaboration tools are accessible and available to employees, therefore should not be considered as obstacles to telework, but as an aspect that affects with a different level of difficulty each occupation. Organizations all this time have gained knowledge on the best implementation of teleworking and it seems that it will be re-shape of working habits, when the pandemic ends (Sostero et al., 2020).

In practice, companies like Pfizer include in the job advertisements the clause “*Work from home options, 2-3 days per week work from home*”, giving a sign on the

future work trends. As a result, the transfer to digital era is unavoidable and has raised the need of HRIS to ensure both the organization's continuity and the employee's highest performance. The *remote workforce* needs to be effectively utilized through HRIS to ensure that the HR tasks will be efficiently accomplished even if an employee is working remotely (Amodeo, 2020).

Therefore, the implementation of IT through multiple programs in HR functions can be classified in three wide categories.

- *Transactional* activities entail everyday record keeping transactions like the payroll information, employee status changes and administration of their benefits.
- *Traditional* activities are involving the HR activities planning, recruiting, selection, training, compensation, and performance management, and these activities outcomes agreeing with the organization's goals.
- *Transformational* activities such as cultural or organizational change, structural realignment, strategic redirection, increasing innovation, add value to the organization (Owusus-Ansah & Kwabena Sakyi, 2014).

HR departments must make use of HRIS to analyze satisfaction levels of the employees by using pulse surveys, as retention rates become of high value, and their successful *engagement* is mandatory. *Communication* is the key for employee's psychological resilience for the future perspectives, and the role of HRIS is to effectively transfer information from one person to another to positively reinforce employees. A utilized HRIS system platform should be developed for engaging employees in *learning and development* programs to achieve their career expectations. Post-Covid employees may searching for an increased sense of motivation and morale boost in working better and HR departments through the effective use of HRIS will recognize and reward employees for their achievements (Amodeo, 2020).

The example of Asia in using digital and mobile technologies helped government and businesses to shape an early response to Covid-19 pandemic and could help other countries around the world (Figure 19)²⁶.

²⁶ <https://www.mckinsey.com/featured-insights/coronavirus-leading-through-the-crisis/charting-the-path-to-the-next-normal/technology-helped-shape-asias-early-response-to-covid-19>

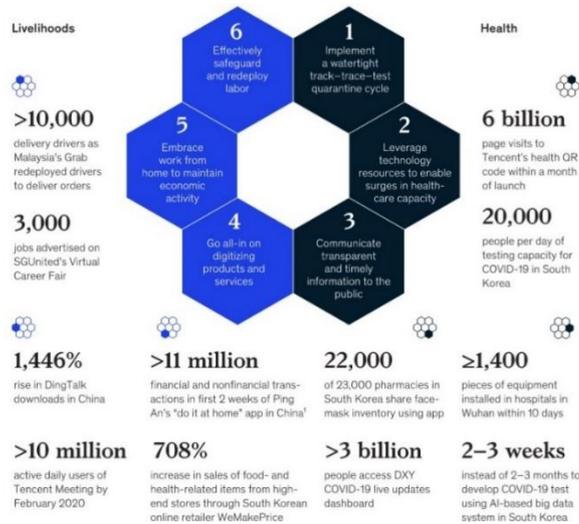


Figure 19: Six ways technology contributed to Asia's response to Covid-19 (Source:

<https://www.mckinsey.com/featured-insights/coronavirus-leading-through-the-crisis/charting-the-path-to-the-next-normal/technology-helped-shape-asias-early-response-to-covid-19>)

Additionally, the use of HR Analytics is expected to increase with organizations investing on data related systems, for example to identify trends and plan workforce based on the differences between remote employees and employees (Lewis, 2020). A real fact is the article of Boudreau (2016), when he described the future work trends, which now seem to start becoming a more vivid reality (Figure 20).



Figure 20: The 4 kinds of Work in the future (Source: Boudreau, 2016)

4.6.2. Leadership

Future of work has now a new direction, digital transformation does not seem temporary. The role of leaders has become particularly important during the crisis period to make sure that the right decisions impacting the staff are taken. Especially during Covid-19 period with the WFH implementation, leadership should be effective in distance and therefore changes in leadership may arise. (Kniffin et al., 2020).

In specific, a leader needs to undertake another role that appears slightly different in comparison with the pre-Covid-19 period, as their aim is to reshape the organization, with the support of HRM, to survive during and after the crisis (Figure 21).

Table 2. Leadership best-practices in normal times vs. times of crisis.

Leadership Practices in Normal Times	Leadership Roles in Times of Crisis
Model the Way	Sensemaker
Inspire a Shared Vision	Technology Enabler
Challenge the Process	Emotional Stability and Employee Well-being
Enable Others to Act	Innovative Communication
Encourage the Heart	Maintain Financial Health of the Organization

Figure 21: Leadership Roles in Times of Crisis (Source: Dirani et al., 2020)

In other words, it is essential that a leader can:

- provide roles and purpose and share leadership (sensemaker);
- ensure the employee's access to technology (technology enabler);
- prioritize emotional stability of employees and promote the organizational resilience (emotional stability and employee well-being);
- communicate effectively so that employees can receive updated and correct information (innovative communication);
- maintain organizational financial health as in that way an important message is sent to the employees (Dirani et al., 2020).

A leader can be anyone, not only at the top levels of an organization. A great leader plans and predicts important disruptions. During Covid-19 crisis a “top-down style of leadership” must be avoided as conditions can change quickly. Leaders must be flexible, open to new directions and discussions, creative, empowering others and avoid of “analysis paralysis”. Realism and optimism are important for providing transparency,

clarity, and accurate communication. Empathy is critical in this global crisis as human tragedy continuous (Forster et al., 2020).

A survey at the early stages of the crisis about how professionals were reacting, identified recommendations in leadership behavior.

- Showing appreciation for a person's work, dedication, effort, and contributions makes employees feel proud and validated.
- Providing the individualized support to the employees from their leaders in these strange circumstances, helped people feel more positive, less stressed, create an atmosphere full of trust and understanding.
- Involving employees in decision making improves their work experience as they feel trusted, needed, and treated as insiders in their organizations.
- Entrust employees with new responsibilities gives confidence and the opportunity to get to know each other, making them feel important to the team success.
- Designate time and space for team bonding through virtual coffee breaks, happy hours, story sharing, games over Zoom, helped people relieved stress, bond with their coworkers, and motivated them to work (Zheng, 2020).

Leaders must also come up with creative ways for the continuity of the organization's productivity and connection of their workforce. Leaders need to “act with both fortitude and heart” by:

- ***Give employees flexibility:*** encourage people to have their family as a top priority and balance their work-life blend with the time they needed, especially families with children, to recharge and reengage with their work.
- ***Keep employees' state of mind at the forefront of meetings:*** give employees the freedom to express their feelings and their needs first, by asking each one showing compassionate understanding and helping them embracing their emotions and being present with their feelings.
- ***Keep employees virtually connected and engaged:*** set "virtual lunches", short “coffee chats”, “virtual cocktail hour” to help employees being connected through social distancing, being socialized and keeping the pre-Covid office interactions “alive”.

- ***Give employees a voice on business matters:*** give employees the opportunity to express their opinion and take action to help them increase their connection with other employees, the leadership, and organization's values (Schwantes, 2020).

Leaders are requested to navigate through an unprecedented territory as the pressure they absorb tends to be high. Therefore, to be efficient and supportive to employees a leader is expected to (Orangefiery, 2020):

- Be available, visible, listen and encourage conversation.
- Be transparent, communicate with clarity, orient communications to what people need to know and do.
- Assert the need for flexibility, be flexible with others, get comfortable with a changing set of facts.
- Recognize that different people deal with stress differently, check their tone.
- Pause and check their behaviors, triage priorities, consider their own well-being

Hence, the most important leadership skills that have been emerged are:

- ***Positive accountability:*** recognizing the personal stressful challenges that employees are facing and maintain positive by demonstrating appreciation and taking a “forward-looking approach to mistakes” and discuss tough issues.
- ***Foresight:*** managing the changing environment, anticipating challenges, and avoiding mandatory situations that overwhelm the organization. Leaders need to overcome their own biases, seek for different perspectives, engage teams to anticipate challenges and encourage disagreement.
- ***People first:*** reassuring employees that the organization do care about their health and well-being, leaders are using multiple channels that reflect to each employee by using weekly CEO webinars, daily team huddles, skip level calls, virtual happy hours etc.
- ***Decisive adaptability:*** the rapidly changing environment requires by the leaders a great deal of analyzing the information and readiness of adjusting quickly through the changing circumstances (McGuinness, 2020).

Additionally, a leader should follow communication practices with the employees as below: 1) Pair the right messages with the right channels; 2) Use old routines for new purposes; 3) Communicate early; 4) Communicate with frequency; 5) Keep promises; 6) Correct misinformation immediately; 7) Refer people to credible sources (Orangefiery, 2020).

Leadership behaviors appeared more important after the pandemic through an agile leadership type. Consumer and retail executives prefer leaders who empower others and promote an open environment over those who practice authoritative or consultative leadership, according to McKinsey & Company survey (Figure 22)²⁷.

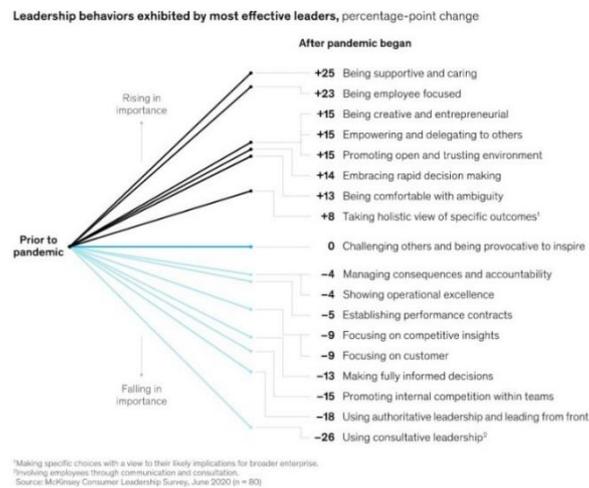


Figure 22: Leadership Behavior (Source: <https://www.mckinsey.com/featured-insights/coronavirus-leading-through-the-crisis/charting-the-path-to-the-next-normal/meet-your-new-leaders-supportive-creative-and-employee-focused>)

The best academic leadership practices for navigating challenges like the Covid-19 pandemic are:

1. A type of leadership that emphasizes empowerment, involvement, and collaboration.
2. A type of leadership that distributes responsibilities to a network of teams on the organization to enhance the quality of the decisions.
3. A type of leadership that communicates clearly and frequently to all stakeholders by using a variety of communication channels.

The type of “allostatic leader” refers to a flexible and adaptive leader that can learn and evolve in a crisis, emerging from it to rebuild the future (Fernandez & Shaw, 2020).

There is no doubt that researchers and practitioners are called to deal with a new undiscovered professional path. So far, there have been some first indications and practices on tackling the pandemic, however many questions arise constantly as new working routines are being established that need to be explored and formulated to the organizations’ environment.

²⁷ <https://www.mckinsey.com/featured-insights/coronavirus-leading-through-the-crisis/charting-the-path-to-the-next-normal/meet-your-new-leaders-supportive-creative-and-employee-focused>

5. Conclusions and Recommendations for Future Research

This thesis has discussed the Covid-19 impact in workplaces with a focus on teleworking and HRIS. As the pandemic is still ongoing, researchers' work around the world is still in progress, the access to related and up to date resources is limited. Hence, research is still at a premature stage.

Additionally, this study has been composed during the lockdown, and due to the limitations in granting access to employees for responding to questionnaires, it has been decided to approach the topic only through literature review based mainly on online resources due to the current circumstances. In fact, the field is extremely broad, as the pandemic has affected various aspects of the work life, which has resulted in an extensive narrative.

Therefore, having reviewed the pandemic challenges, it seems that HRM needs to focus on reviewing and amending its tools and practices to correspond to the new workplace reality, while there are still a lot of issues for future research that are essential to be studied further.

According to Carnevale and Hatak (2020), this period in modern history is especially important and challenging for scholars as they are called to find solutions to a global problem, where a coordinated and integrated approach might be proven as more effective. To begin with, as we might refer to a re-start of work reality, the scholars in the post-pandemic era should pay their research attention to both fields of IHRM and HRM.

5.1. Further Recommendations and Conclusions in the IHRM field

Some of the issues that pandemic has raised in the international field of HR refer to the need of management under unstable times; along with the facilitation of global work; and redefining of performance.

Global uncertainty is experienced by all, but it may have different reactions across cultures. Future research needs to focus on the ability of global leaders identifying and responding effectively depending on the cross-cultural context. However, human capital may differ across cultures in multinational enterprises and research should examine if those talent systems are working in a standardized and globally uniform way.

Collaboration under stress should also be studied and identified whether this new

context needs further competencies and if employees' experiences have helped them collaborate effectively during pandemic. *Managing serious health* problems among employees should be researched and attention may be given on supporting managers who are dealing with these. As most IHRM research have been focused on the negative consequences for health, attention should be given to explore the positive aspects and outcomes of the global work.

Moreover, *global teams and virtual collaboration* arisen as the pandemic highlighted the cross border working by staying at home. Future research needs to examine the global virtual team bond between the members, as conference calls are allowing colleagues to enter to each other home. Hence, the current context of virtual collaboration could be used as a basis to examine its effectiveness in all types of collaborations; the first-time home workers; the cross-national; generational, functional differences between employees; the risks of large-scale virtual conferences (psychological and practical barriers). The role of Information Systems is highlighted and IHRM researchers must gain knowledge from this area to achieve the best support. In the same way *international assignments* seem to fail due to the border closure and future research needs to be focused on alternative control mechanisms for subsidiaries; alternatives for developing global leaders; and facing lack of skills in host countries and expatriate adjustment.

Last but not least, the role of IHRM in building business resilience is particularly important as Covid-19 crisis has been directly associated with sustainability. Humans are using the world's ecosystem unsustainable by promoting working practices like frequent international travels that can be effortlessly replaced by virtual working. IHRM research can now focus on the contribution to fulfill the United Nation's sustainable development goals (SDGs) by replacing the amount of commuting and travels with virtual working and provide health and safety that is associated with work and travel destinations. During the lockdown period environmental improvements to air quality, noise levels and congestion have been occurred and now IHRM research are more open to search new ways to foster sustainable management practices.

Although research has been focused on high-status professional employees, future awareness should be given to the entire workforce and their needs as pandemic worsen the conditions of insecurity, disempowerment, and vulnerability. Scholars must understand the role of globalization from the job creation and job loss point of view and IHRM researchers may contribute to this (Caligiuri et al., 2020).

It is crucial also for the researchers to support the HRM area and give answers to the questions arisen during the pandemic.

5.2. Further Recommendations and Conclusions in the HRM field

Research in the HRM field must give answers among other in various issues including the crisis management and organizational norms; the information systems; the health and well-being of employees; the teleworking-WFH status; the virtual settings; and the career development.

In that framework, the impact of individual and demographic characteristics on the perception and response to Covid -19 along with the need to identify new ways of empowering inclusion among minorities should be researched. Empowering equality and reducing biases due to demographic characteristics are particularly important (Kniffin et al., 2020). Research should focus on “digital divide” effect, referring to specific demographic groups that are digitally disadvantaged groups meaning vulnerable groups such as people who are elderly, have low education attainment etc. (Barnes, 2020).

Beaunoyer et al. (2020), also suggest that focus will be needed to understand better the multi-level interactions on digital inequalities, and to identify the feasibility and efficiency of potential mitigation strategies regarding topics such as resource availability and constraints, social acceptability and political context, and timeline of implementation. In addition, inequalities among populations and between countries have been worsened, post-pandemic era requires a systemic approach between business, government, and society for a united effort on working together (Hite & McDonald, 2020).

5.2.1. Crisis Management and Organizational Norms

Researchers should examine the critical interventions that can be implemented during critical and unstable periods and identify the outcomes of them (Dirani et al., 2020) and study the different elements of crisis (like uncertainty and interactions with multiple stakeholders), how they interact with leadership development and emergence Lagowska et al., 2020).

At the same time, the field of entrepreneurship seems to be worth being studied as it can provide useful insights in working under dynamic and uncertain conditions. An

entrepreneur's profile includes many challenges like the ones that Covid-19 era employees face: need for flexibility, well-being, work, and life balance while also holds qualities as autonomy and job design that have been proven beneficial to adjust in turbulent working environments (Carnevale & Hatak, 2020).

In terms of organizational norms research should examine how the employees' and organizations' values, characteristics, political views have affected their approach on Covid-19. In other words, it is interesting to identify how organization tighten or loosen their culture due to the pandemic (Kniffin et al., 2020).

Employee's needs must be also treated by HRD on an individual basis as the pandemic have been experienced differently by every individual. *Organizations together with communities* may develop innovative ways for equitable pay structures and healthy workplaces due to the pandemic impact. HRD can try on developing more humane organizational cultures that promote altruism, empathy, and prosocial values. *Self-care* is another important field that HRD professionals need to be consider as they might find themselves vulnerable to job loss and having stress in their efforts to help organizations and employees during this crisis period (Hite & McDonald, 2020). HRM and organizations should also focus on establishing policies and mechanisms on sexual harassment prevention and monitoring.²⁸

5.2.2. Information Systems

As the pandemic has dived people into the digital world, information Systems have been considered as a fruitful ground with future research opportunities that can create value. The exclusive key areas for future research named as 8Es include (Figure 23):

²⁸ https://endingviolence.org/wp-content/uploads/2020/05/EVA-BC_Preventing-and-Responding-to-Workplace-Sexual-Harassment-During-COVID-CLR.pdf?fbclid=IwAR1fhh2L0NecW90u-Cc6oRW-dRZOoYVvBqCzzkPBexA-Na-nMds4hnLV2MM

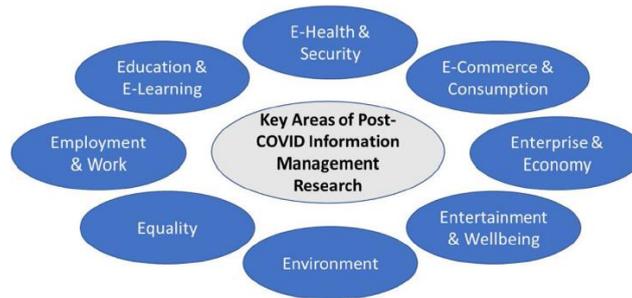


Figure 23: *The 8Es of Post-COVID-19 Information Management Research* (Source: Barnes, 2020)

For example, academic focus should be given on coordination and exploration of safe data sharing practices among countries or investigation of the implications of technology in employment, work practices and innovative approaches etc. Furthermore, researchers of information management should contribute on providing further insights on technology positive or negative impact which remains controversial, with an emphasis on the arising problems from overuse of technology, and new technologies that can support managing problematic technology use and enhancing well-being (Barnes, 2020).

In terms of HR, according to David Wilson, CEO of Fosway Group, HR industry Analyst in Europe, there is a need to invest on new, more advanced HRIS. He states that “...for the majority, their HR systems are not actually designed to record or analyze the data necessary to provide business critical answers. There is enormous reliance on managers and spreadsheets to support new daily reporting, and only a minority have the tools to model the future impact of Covid-19 on their workforce and ongoing business operations”²⁹.

5.2.3. Teleworking-Work from home

In terms of teleworking field, when situation comes back into normality and teleworking modality will not be an imposed measure, it is important that future research should focus on clarifying the various definitions and types of teleworking to work on new theories and models, because of the transformation of the traditional office-based work. Research methods should also be reviewed along with the influence of assumptions on that topic, which lead to misleading results on the impacted parties and outcomes.

²⁹ <https://www.fosway.com/research/next-generation-hr/covid19-research/>

Additionally, it is important to identify the mechanisms that employees present as a response and escape from work pressure-in that context, a root causes research would be useful (Bailey & Kurland, 2002).

During the pandemic, teleworking and in specific, WFH has been implemented broadly. In that context an evaluation of the companies that applied teleworking will be needed in the post-Covid era. It is interesting to identify whether crisis has been a perceived as a driver that has opened the road to future teleworking or only as an urgent response measure with limited future application (Belzunegui-Eraso, & Erro-Garcés, 2020).

In terms of teleworking (and e-leadership that will be mentioned below), it is also recommended that the research methods will shift with application to bigger sample and more methods such as of longitudinal or experimental (Contreras et al., 2020). Teleworking studies should also focus on how the work and nonwork experience of an individual influences one another, and how the work and nonwork identities of the individual are expressed at home. Additionally, the effect of the Covid-19 quarantine and WFH on productivity, creativity, and innovation is important to be studied further. Motivation and authenticity at work is another subject to be discussed as an implication of WFH practice in the post-Covid era, especially in the times when employees will be in between of collocated settings (Kniffin et al., 2020).

5.2.4. Virtual Settings: virtual teamwork, management and leadership

Research on virtual teamwork should focus on the emotions' expression and management in the virtual world and innovations to enable optimal work of the system. Also, as various forms of virtual teams have emerged (face-to-face, virtual teams, combination), further work in classification of teams would be useful. In terms of virtual leadership and management scholars should focus on the participatory relationships in high-virtuality work arrangements-communication and feedback mechanisms of the leader, along with the leadership approach. Additionally, assessment on the Covid-19 changes in training programs shifted to the on-line status and how it will affect the efficiency, accessibility and effectiveness of the training programs must be conducted. Trust and how it is empowered through virtual systems, especially for newcomers is another important issue for future research (Kniffin et al., 2020).

As crisis situations can change the leadership styles (Stoker et al., 2019), the emerging type of leader during crisis should be reviewed. E-leadership is a new concept without evidence that the existing leadership models can be applied virtually since the results of effectiveness of e-leadership are incomplete. Therefore, researchers should study further on e-leadership and connect it with the teleworking feature (Contreras et al., 2020).

As working reality has changed, private and professional lives of home-office employees are facing a routine disruption and uncertainty. Further research may need to examine on how crises affect the effects of virtual leadership (Lagowska et al., 2020) and also to identify strong and weak spots and best practices among e-leadership and teleworking to manage them both (Contreras et al., 2020). In that framework, scholars explore other types of leadership and suggest that the inclusive leadership style as a good fit in that period as an approach of handling stress and insecurity to caregivers (Zhao et al., 2020) while others suggest that feminine leadership style might seem more suitable, despite the preference to masculine leaders (Kniffin et al., 2020).

Women representation in leadership positions and in all stages of public health management systems is essential as it has been proven that women are decisive and can take serious decisions during a crisis period, in the same way as male. This will help to recover quickly from Covid-19 crisis and to prevent future disasters (Leung et al., 2020; Donthu & Gustafsson, 2020).

Regardless of the type of leadership, the effectiveness of leaders during and after the pandemic should study various aspects such as the extent to which remote leaders: are persuasive, clearly express the guiding values of the organization, discuss with employees on difficulties and opportunities, communicate with the team the vision and show confidence that strategic goals are achievable (Kniffin et al., 2020). Further studies may assess the perceptions and effectiveness of leader's humility and explore how this effecting during crisis. In the context of group decision-making and collective leadership need to be examined how leaders process information that are against the majority and how they can persuade other stakeholders about that choice.

During leadership under crisis, leaders need to capitalize their skills as they are handling information outside their expertise, and scholars need to evaluate how these skills can work on a period of crisis. The ability of leaders to tackle these unprecedented challenges of pandemic that have affected organizations and governments worldwide, stands limited (Lagowska et al., 2020).

5.2.5. Emergent Changes for workers (social distancing, loneliness, health, well-being)

Research should work on identifying ways for organizations to support the social interactions while employees WFH and assess the efficiency of practices/innovations introduced (e.g., virtual lunches) during the Covid-19 period to decrease loneliness and increase resilience. New wellness programs for the employees tackling isolation must be created.

Moreover, researchers should examine the effectiveness of the Covid-19 and post-Covid era on job redesign and crafting to improve the working conditions compared to the pre-pandemic period. Sickness in relation to the WFH modality is another issue to be further checked for the post-Covid era along with the presenteeism and the preservation of privacy rights of the employees in relation to health checks (Kniffin et al., 2020).

5.2.6. Career Development

The impact of the pandemic in career development is defined as career shock where unpredictable events can cause rapid changes in the career environment. Individuals need to re-consider their working lives and organizations their future and their employee's future (Hite & McDonald, 2020). According to Akkermans et al., (2020), there have been identified lessons on career shocks from the impact of the Covid-19 on careers, together with advice for future research:

Lesson 1: The implications of career shock are directly impacted by the interplay between contextual and individual factors. Different scholars have presented a board range of factors that may affect career shock, in all, literature indicates most important are career resources and behaviors, may impact the way people manage negative career shocks and take advantage of positive ones. Contextual and individual factors and their dynamic interplay is essential for scholars studying the implications of the pandemic in identifying how career shock may affect people in a distinctive way.

Lesson 2: A career shock can have a different impact in the short-term vs. the long-term and for different career stages. Scholars may need to study both the short-term and long-term consequences of the pandemic in careers. As they mostly identify negative

impacts, research has showed the advantages taken from the opportunities of “thinking outside the box” context could appear. However, the career stage is a critical component that can be impacted by the pandemic and requires further study. Young or early career individuals may experience long-term psychological effects or may worry less according to their personal situation (if they have children, loans, etc). Mid-career adults may have added stress in the case of losing their job and need to seek for a new one. Later-career individuals and retirees may experience high stress due to death rates of elderly and uncertainty of pensions and future investments.

Lesson 3: Negative career shocks can incur positive career outcomes. The impact of the pandemic may lead to new career opportunities raising the job satisfaction and the life balance opportunities. Re-evaluating the career directions and widen life aspirations may translated into a positive sign through a negative shock. The ‘flexibility stigma’ that resulted by the adoption of new forms of technology and flexible working arrangements of telecommuting may have added advantages for unwilling organizations (Akkermans et al., 2020).

Career resilience is an inevitable part of Covid-19 impact and many scholars believe that it can be affected by both individual and contextual factors, the “risk and protective factors”. To solve the resilience problem organizations, need to focus on encouraging employees' resilience by changing the individual, rather than changing the environment. A post-pandemic future of work must invest on retaining the most talented workforce and change the conditions within an organization that may generating the adversity. Learning from the Covid-19 experience and applying that knowledge is a key point of building a sustainable post-Covid-19 career.

Chudzikowski et al., (2020) suggests the dimension of context to the sustainability connection to the post-Covid-19 work, and how this can influence the career choices by prioritizing their needs in conjunction of their organizations’ and community’s needs, and how these vary due to career stage. Human Resource Development professionals can play a key role in *helping individuals* recover and sustain their careers by creating better prepared workplaces for future events.

Training employees for advanced skills, refocusing in other jobs and future plans, may build sustainable careers through good preparation, continuous learning and job generalization, will provide a potential template for post-Covid-19 careers. Focus on learning, expanding personal skills, support from others and taking care of physical and spiritual needs can ensure resilience. As the global uncertainty continues the questions

addressed remain rhetorical, the full impact of Covid-19 is unknown as the data about unemployment numbers and relative gains are changing every day, the impact in job sectors and the speed of recovery remains unspecified (Hite & McDonald, 2020).

As a response to the crisis, The International Monetary Fund (IMF) of the G-20 Virtual Meeting on November 21-22, 2020³⁰, has worked on its future policies that should be focused on three key priorities:

1. **End the health crisis:** Pandemic must be defeated everywhere using across border cooperation for supply of vaccines, treatments, and tests, remove trade restrictions on all medical goods and services. Faster progress on widely shared medical solutions are estimated to add \$9 trillion to global income by 2025.
2. **Reinforce the economic bridge to recovery:** Support growth, jobs, and financial stability especially to small and medium-sized organizations, and public sector investments will help increasing employment and strengthening private sector productivity.
3. **Build the foundations of a better 21st-century economy:** Enhancing access to digitalization will broaden inclusion and help global growth potential to lift. Climate change requires a green investment push and zero net carbon emissions by 2050. This policy will lift global GDP and create about 12 million new jobs over a decade.

The pandemic brings forward the unsustainable way humans treat the world's ecosystem and should alert from rethinking working practices to this direction (Caligiuri et al., 2020). Moreover, it is a powerful opportunity for organizations to understand their strengths and weaknesses, what engages and motivates their people and realize their *raison d'etre* (Koehn, 2020). As John F. Kennedy stated during his speech in 1959, "When written in Chinese, the word "crisis" is composed of two characters - one represents danger and one represents opportunity"³¹. The scale of change is extraordinary, and the world of work will be different in the post-pandemic era. There are many questions in individual and organizational level that cannot be answered until the dust settles (Li et. al, 2020).

³⁰ <https://www.imf.org/external/np/g20/111920.htm>

³¹ <https://www.jfklibrary.org/archives/other-resources/john-f-kennedy-speeches/indianapolis-in-19590412>

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