

CURRENT TRENDS IN MANAGEMENT: A LITERATURE REVIEW

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Abstract:

In a world so different from the one of last century, featured with uncertainty, quick changes in tastes and needs and industry paradigm shifts, companies are demanded fast adaptation and capability to assimilate knowledge and learning from both internal and external sources. This is the context in which modern management practices emerge. Novel routines and doing certain practices in different ways may be an opportunity for employees to learn something new and renew their excitements for their job. To adopt these trends, companies need to be fully committed to abandon traditional and out-of-dated practices, that is their organizational culture should allow to embrace novelties and to welcome and incorporate unfamiliar knowledge. The current work attempts at describing and reviewing what the current trends in management are. Because the scope of management is broad, trends are chosen according to our experience and knowledge. Particularly, the focus is on management trends are uncertainty, unforeseen events (e.g. COVID-19) and sustainability. Opting for a literature review, it was possible to find these trends and observe a characteristic that they have in common: they reflect the need for agility, being flexible and be open to welcome flow of knowledge to the company's organization. Among the trends found, transversal teams, open innovation, lean startup approach and risk management. In order to be fully working, it is argued that organizations should adopt a flat structure and simplify formalities.

Keywords: management, trends, innovation, agility, COVID-19, sustainability

JEL Classification: M1, O30

INTRODUCTION

The contemporary world features increased turbulence and uncertainty, that companies, among other entities, have to deal with. Important changes and breakthroughs introduced by the Fourth Industrial revolution (4IR), novel technologies, the COVID-19 pandemic and sustainable measures are making it more difficult for companies to carry out their business and operations in traditional ways. What is more, competition is as fierce as never before, and global. Methods that have worked in the past are often not suitable in the new modern society. This has conditioned the emergence of new management approaches and tools (Cambalikova, 2021). In such a setting, companies need to rethink their management and opt for innovative and "non-conventional" practices that help them to improve their productivity, everyday life at the company, renovated and motivated spirit to work differently. Yet, the risk of mismanagement and of uncertain future outcomes deriving from novel practices must be taken into account: risk management attempts at mitigating it. Those companies that are anchored to the past, employing traditional routines and outdated management practices risk to be overcome and defeated by those ones which practices are more contemporary. In addition, they may require more time to act in response of any internal or external change.

According to the literature, current management trends seem to help companies to achieve the required level of adaptability and ease, generally, changes and innovative processes and innovations. Being aware of up-to-date practices is key for any businesses, regardless of their dimension. So, they should be promoted, assimilated and employed in the management of their organizations. In this way, not only can companies

boost their competitive potentials (or achieve a competitive advantage), but they can improve their innovativeness too. Solving a problem, launching a product, and reengineering a process necessitate seeing the world in a diverse way and acting accordingly (Garvin, 1993), which find an ideal ground in new management practices. Moreover, doing tasks in different ways and learning new practices may be stimulating for employees, who would likely appreciate abandoning their everyday routines and would renew their motivation and excitement to work for their organizations.

Yet, when introducing and implementing new management practices, as for any novelties, an organization should make sure that its culture and values allow such implementation and management ought to intervene otherwise. The description of culture given by Nham et al. (2014) fits such a context. Accordingly, organizational culture is a personality that gives a mean to the organization, and it is the primary driver in guiding people to carry out their activities. Formally, it is composed of a long-lasting collection of collective attitudes, values and meanings that influence the thinking and behavior of the members of a company (Harrison & Corle, 2011). So, organizations are shaped by their culture and influence their employees in what they believe and their values. If deeply rooted in an organization, the sense of prejudice towards and refuse what is not created in the organization, known as “not invented here syndrome” (discussed more in details below), may display among the employees. This refusal may lead to not accept an opportunity from the external environment because, according to the organizational actors, traditional practices have always worked and have been successful. Kotter (2012), debating on the causes behind the fall of Kodak Inc. – the camera giant-company of the last century -, argues that the company was gratified by its past, which resulted in self-satisfaction that would not let its employees see possible opportunities to seize.

Novel practices are the result of years of studies and improvements of older management tools. For instance, the publication of Eric Ries’ book titled “The Lean Startup” (2011) shed lights on Toyota’s (and other successful companies) best practices that contribute to make more flexible and simplify companies’ structure, adapting them to contemporary perspective of companies’ external and internal needs. Modern practices may also be pushed by organizational stakeholders, as in case of sustainable ones. Consumers and other stakeholders are more conscious of the environment and the need for practices that favor communities from a societal and environmental point of view. These practices can be enhanced thanks to Industry 4.0.

In the management literature, it seems that publications are mainly oriented to one particular aspect of management, to e.g. globalization (Cambalikova, 2021), human resources (e.g. da Silva et al., 2022; Danvila-del-Valle et al., 2019), operations and so forth. Apparently, it lacks a work that attempts to review practices of management from different fields. Therefore, in this article, the aim is to present a general picture of different trends from many fields of the management discipline. Knowing the trends. More specifically, it was opted to shed light on what demanded by the firms environment, especially for great turmoil and changes in progress. This work reviews the most important trends in management, it attempts to assess them and find common features and qualities. The motivation to write this article is exactly driven by the

The research questions are thus the following:

1. What are the current trends in management arisen in order to face uncertainty, changes in market and unexpected events?
2. Do these trends have any treat/s in common?

The rest of the paper is organized as follows: the next section is about the methodology used, then findings from the literature review are presented; lastly a discussion is conducted and lastly conclusions are made.

1. METHODS

To accomplish the objective and answer the research question, it was conducted a literature review. A literature review is useful when the aim is “to provide an overview of a certain issue or research problem” and can be used, among the others to “discuss a particular matter” (Snyder, 2019). Papers are collected by the authors and selected at their own discretion (Nakano & Muniz, 2018). The resulted picture from the literature

review is not an exhaustive one as the aim is to give a picture that is as accurate as possible (Nakano & Muniz, 2018).

The first research question aims at framing the trends in management in relation to their relevance to face current relevant challenges featured with uncertainty like COVID-19 pandemic and changes brought about by Industry 4.0. Moreover, those tools to support management in our dynamic market and for enhancing sustainable practices demanded by different stakeholders ought to be described and analyzed too. A Preliminary research was conducted on Web of Science database. The keyword for the research was *management AND (trends OR practices)* and the results were limited to the field of *management, business and economics*. The research result gave 137,424 publications, of which 1639 “highly cited”. However, the papers found do not discuss generally trends in management, but they focus to specific area of it (HR, digitalization, supply chain).

Therefore, it was opted to choose trends according to experience, knowledge and, similarly to Cambalikova (2021) who uses Bain & Company’s 2017 report as a basis for her research, the analysis relies on reports published in the period 2020-2022 by the “Big Four”, global consulting firms, namely, McKinsey, KPMG, PricewaterhouseCoopers (PwC) and Ernst & Young (EY). These reports were found on Google search engine. The keywords were structured as it follows: e.g. *Management trends “McKinsey”, Management trends “EY”*. Because they mention current trends for management and businesses and what to expect in the future, the criteria to select current trend is that they must be mentioned in these reports. These trends are not necessarily “new”, but they are sometimes required by the challenges businesses and management face. Among the others, the following reports were analyzed:

- **McKinsey:** Sneader, K., & Singhal, S. (2021). *The next normal arrives: Trends that will define 2021—and beyond*
- **EY:** Little, J. (2021) *Five major trends which will underpin another decade of digital innovation*
- **EY:** *Megatrends 2020 and beyond, 3rd ed.*
- **KPMG:** *Sourcing Trend Radar 2022*
- **KPMG:** *Current trends in remote working: Work from Anywhere (2022)*
- **PwC:** *Top trends in preparing, responding and managing change*

Once identified the trends, a literature review was conducted to examine them. The publications were searched on several databases (namely, Web of Science, Wiley Online Library and SpringerLINK) and they were filtered among those written in the English language and, using the Boolean search operators AND and OR, the results were obtained. Terms for the research were e.g. “management AND trends”, “(pandemic OR Covid-19) AND management trends”. Sometimes some terms and concepts were analyzed more in depth. The preferred publications to be considered were recent: they had to be published in 2012 or beyond. However, sometimes, it would be opportune to also mention some older articles that are the foundation for the current literature, can be used to compare older practices with modern ones or that were cited in recent publications. If the abstract was considered to be pertinent to answer the research questions of this article, publications (journal articles, conference papers and other academic manuscripts) were read in detail. In addition to these sources, books were analyzed too: they offer practical examples of the state-of-the-art in management.

2. RESULTS

This section summarizes the findings of the literature review. The discussion starts with the description of knowledge management, which has the determinant role to assist the organization to welcome novelties from the external environment or generally adopt anything that diverts from traditional management practices.

2.1 Knowledge management

HR has to manage the paradox of “doing the new with the old”, select, develop and prepare managers and staff to contribute to strategic agility in the future, and not simply play an effective role in today's prevailing conditions (Doz, 2020). In such a setting, companies can explore and experience new approaches in their everyday routines. If companies stick with old practices, if they are not able to exploit external opportunities and employees have a closed mindset risk to be overcome and be “defeated” by the competition. Knowledge management has the “duty” to create an environment in which there is a smooth flow of information and acquisition of knowledge towards the organization. This knowledge can come from the organization itself – by employees - or from the external environment – e.g., rivals better at doing something or in areas in which the undertaking is weak. It consists in the successful capturing and distribution of this knowledge (Al Saifi, 2015). In addition, knowledge management effort is about supporting an environment where knowledge is created, disseminated and capitalized on (Barreto, 2003 cited in Al Saifi, 2015). Yet, the objective assessment of external knowledge is a crucial and complex managerial challenge (West et al., 2014 cited in Hannen et al., 2019),

A challenge is represented by the flow of knowledge and the organizational learning may be hampered by the so-called manifestation of the “not invented here syndrome”. Solutions have been studied to mitigate this not rare phenomenon. This syndrome is formally an individual's negative attitude towards knowledge that comes from a different field of expertise, from another organizational entity, location, and thus, is felt “outside” or “external” to the group(s) or organization(s), in which the individual is surrounded and that results in a rejection of ideas coming from outside (Antons & Piller, 2015; Hjalmarsson et al., 2019). Therefore, this condition makes it harder for a company's organization to accept new knowledge that is not common among a group of actors of the organization, to skeptically prejudge something – e.g. a new technology, a new product, a process. The condition could be company's actors would live in a bubble that hardly can be broken and that prevent management from gaining new knowledge. For an innovating organization, this bias turns to be economically damaging when knowledge is refused or not fully exploited despite its considerable potential value (Kathoefter & Leker, 2012; Lichtenthaler & Ernst, 2006; cited in Antons & Piller, 2015).

Gesing et al. (2015) suggest introducing incentive systems based on mutual trust and partnership and fostering on these values. Besides, contacts to external knowledge providers should be intensified. According to Aquilani et al. (2017), it can be managed by establishing new roles (for example, idea scout, idea connector, integration expert, or champion of innovation). Furthermore, Amann et al. (2022), whose results cannot be generalized to all industries as their study limit to innovative transportation solutions, found that it is possible to improve corporate innovation hub's governance structure by detecting, mitigating and/or preventing not invented here and not sold here problems. The latter is oppositely that protective attitude manifesting when an entity has to share its internal knowledge to partners.

With the right mindset and corporate culture, flow of knowledge is eased. In the related management literature to organizational culture is recognized the most substantial contribution to effective management of knowledge in companies. The kind of culture that positively impact “the tacit knowledge-sharing behavior of the individuals” is known as clan culture, i.e. whereby team work prevails and programs whose goal is the employees' involvement, a high dedication of employees to colleagues, and organization and corporate commitment to the employees (Suppiah & Singh Sandhu, 2011; Asrar-ul-Haq & Anwar, 2016). Companies described by Senge (1990), known as “lifelong learners” – in which there is a continuous stream and creation of knowledge -, are now rare. As a matter of fact, a substantial reduction of their life span and the need for abrupt changes and more and more disruptive innovations to survive in nowadays markets, due to e.g., current digital transformation brought about by the 4IR (which implies a radical transformation). Being it a revolution, I4.0 is “abrupt and dramatic”, so an “earthquake” of the processes and business model would be more suitable (De Wit, 2017).

2.2 Flat organizations

Companies require agile systems and flexible business that suit and favor innovation and in which modern tools of management can realistically work. In other words, thanks to agile management companies can reactively change their business model to successfully manage the innovation process and adapt to welcome external opportunities. Moreover, the efficacy of new organizational knowledge may be contingent on the agility of organizations to exploit opportunities and neutralize threats from the business environment (Cegarra-Navarro et al., 2016). Flexible organizations well fit fast changing environments and a contemporary context in which competitive advantage is gained through high-speed innovation (Appelbaum et al., 2017a). According to Yang and Liu (2012), enterprise agility is able to recognize changes in environments and quick respond to such change by flexibly assembling resources, processes, knowledge and capabilities.

An organizational structure that supports agility is flat organization. A flat organization is any organization structure with simplified bureaucracy, broader span of control and less monitoring of supervised employees. In organizations with this structure, employees are supervised less while promoting their increased involvement in the decision-making process. Flatter organizational hierarchies or wider spans of control in organizations resulted from shifts in greater empowerment and participation in decision making, some trends noticed in organizational culture (Goksoy et al., 2012). Extensive documentation shows the beneficial effect of this organizational structure whose outcome are higher productivity and greater employee satisfaction (Goksoy et al., 2012). According to Jaruzelski et al. (2011), innovative companies usually opt for this kind of organizational structure because the innovation process is more transparent to the executive team who can monitor and evaluate it.

A rigid-structured company could work in the past in which market turmoil happened with less frequency than now and breakthrough innovations were fewer, i.e., in stable environments. Most well-established companies are designed to optimize much more for efficiency than strategic agility". High levels of bureaucracy and rigidity to respect the hierarchical structure and the slowness to take decisions inhibit a company to react to external (and internal) threats and opportunities.

John P. Kotter, emeritus professor at Harvard Business School, is a guru of change management. Through the years, he adapted and updated his well-known "Eight-step model" to companies' mutated structure, as in his publications it is possible to observe that. For instance, as himself admits, the first version of his model illustrated in "Leading Change" (1996), is no longer suitable for companies that are rigid, but rather flexibility and high degree of agility are the requirements. The same Kotter (2012) argues that a hierarchical structure does not work anymore in the market economy. In 2014, indeed, the author published the last version of the model taking into account current management trends such as the importance given to teams and flat organizational structures and decision-making empowerment around the company. In addition, he also proposed a dual structure that in some way conceals existing hierarchies and flexible structured companies. This system allows a hierarchical company to continuously renew and not episodically renew (Appelbaum et al., 2017b).

2.3 Cross-functional teams

Job rotation is employed in order to promote learning between groups. Regularly employees change their job position and acquire new different knowledge that can limit the development of group resistance to acquire new knowledge exchange between groups. In Japan, job rotation is a common practice in which employees acquire knowledge and competencies from different job positions. Similar gain may be found in the current trend of transversal teams, known also as cross-functional teams. These teams are temporary, and their members come from different departments (Kathoefer & Leker, 2012) and can be from different organizational levels: share of knowledge and confrontation among people with diverse background is inevitable. Still, this exchange of knowledge is possible if the organizational knowledge management effectively works. Despite of the acknowledged benefits of cross-functional projects to favor knowledge sharing and crucial to project

success and innovation, management must be aware of the that it is a complicated process (Ghobadi & D'Ambra, 2012).

This heterogeneous composition of teams is likely to have a higher effect in terms of for instance problem-solving and ideas than traditional ones because of the alternative points of view members will have on what the team is analyzing. Normally, members of teams have complementary skills. Altogether, these diversities affect in a positive way team performance. Thanks to different skills and abilities, through a coordinated effort synergy could be generated. Combining the contribution of team members, it is possible to have greater outcomes compared to the ones of single team members. What is more, innovation is increasingly promoted across team members thanks to the specialized knowledge each of them has (Yoo, 2015).

2.4 Open innovation

Organizations with no particular challenges hampering the management of knowledge and the flow of knowledge within and especially from external organization environment are likely to have effective open innovation. Open innovation involves indeed exchange of information. Companies and consumers – who assume the role of “prosumers” -, universities, research institutes and even competitors collaborate to innovate a process, a product or a service. According to Chesbrough (2003) – the first to acknowledge the tendency of companies to look for external collaborations -, the choice to use open innovation for companies is key due to the fundamental need of organizations to adapt to changes in the environment whereby they carry out their operations. What is more, globalized world and the rapid changes in consumer's preferences and tastes well suit this type of innovation thanks to its characteristics and its advantages over traditional innovation management. The latter is characterized by “close” innovation, in which the company's research and department (R&D), must guarantee continues innovation. Obviously, large amount of capital must be provided in order to finance this strategic department and, with a lack of economies of scale, products might be costly to produce. It is thus imperative nowadays to be open; those relying on open innovation have organizational flexibility and capabilities “that combine disparate pieces of knowledge together in useful ways that solve real problems” (Bogers et al., 2019).

Open innovation expands the opportunities that a company with a close innovation would have in exploiting its R&D. The external environment may be ground for the flow of fresh ideas: “valuable ideas can come from inside or outside the company, and can go to market from inside or outside the company, as well” (Chesbrough, 2003). More recently Chesbrough and Bogers (2014) gave to it a renewed definition, which stresses the importance of the management of knowledge. Accordingly, it is a process “based on purposively managed knowledge flows across organizational boundaries, using pecuniary and non-pecuniary mechanisms in line with the organization's business model”.

Organizations that pursue this kind of innovation share and disclose knowledge and competences with external stakeholders. Of course, firms can decide which parts of the knowledge to disclose and those ones to keep proprietary (Bogers et al., 2019). Moreover, companies have the possibility to share costs and reduce the development times of products (Perks, 2000; Yalcinkaya et al., 2007; cited in Griffith et al., 2021). An increasing number of multinational enterprises has been employing models of this kind in which both internal and external ways to exploit technologies are being utilized and, at the same time, they benefit from the knowledge obtained from external sources (Chesbrough, 2003). The simplest and easiest form of open innovation is represented by external suggestions by customers (West et al., 2014), like feedbacks. Frishammar et al. (2019) argue that an open business model enables a more effective approach for the creation and capture of value as it does that in new ways by allowing new sources of revenues (e.g. licensing, spin-offs, or direct sales of technology). In addition, lack of internal resources is the main driver for SMEs to adopt open innovative practices (Spithoven et al. 2013).

Nevertheless, this practice presents certain risks that emerge for its nature. For example, opportunistic behaviors, knowledge leakage, or it may create a learning race between partners (Estrada et al., 2016; Park et al., 2014; cited in Griffith et al., 2021) that would be counterproductive for the undertaking and, as a result,

its outcome would not be the one expected. This risk may be limited through the intervention of institutions that regulate this practice and protect interests of all stakeholders in the open innovation process.

2.5 Lean startup method

A trend related to open innovation is the Lean Startup. It allows companies to monitor through testing and validating the new designed product in its very early stage of development and quickly understand whether a product will not succeed in the market. Consumers are central in the production process, and they may be considered the judges of prototypes and products not yet launched in the market. If it turns out that a product is not accepted to this limited public, it is evaluated the interruption of its development; resources can be saved and employed somewhere else (Jesemann et al., 2021). Because of its nature, flexibility and agility are a must and workers are demanded to accept the interruption of the development of a product/service. More generically, the rationale of applying a Lean management philosophy is cost reduction, quality and time in product delivery while being more efficient, utilizing fewer input resources (Contreras, 2016). Traditionally, companies make elaborate products without having no information and feedback about it. This, along with decisions based on wrong information influence developers who stick with ideas that will not be successful and resources spent on product will seriously jeopardize and in some cases bring the manufacturer out of business (Ries, 2011).

The Lean Startup method derives from Toyota's lean manufacturing principles that Eric Ries adapted to entrepreneurship and to the development of process. In his book "The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses" (2011), the term startup generically indicates any organization that under uncertainty is creating a product or a service. Furthermore, it is very versatile, and it can be applied to any industry. Both multinational and startups can apply its principle and shape it to their particular circumstances. It consists of constant customer feedback, iterative testing of prototypes and continuous improvement through learning.

In order for this approach to properly work, employees should be trained to engage, communicate and interact with the customers (Jesemann et al., 2021). Specifically, a peculiar training for employees is the presentation of the so-called MVP (minimum viable product), that is, to portray the idea of a specific product at a very early stage. If it presented severe defects, it would be reasonable to carry out presentation of the MVP anonymously: the manufacturer will not undergo damages to its image (Jesemann et al., 2021) and at the same time it would be able to make the necessary improvements or simply dismiss it from production. The early intervention has the obvious advantages to save costs (and invest them in something else) and know in advance whether a product will be welcomed or not by consumers. To measure the success of a particular product, the approach foresees decision-making based on evidence – not emotions - which is provided by scrupulous and at the same time easy to interpret measures (innovation accounting).

2.6 Sustainable practices

An increasing awareness of the importance for companies to be sustainable in their business among policy makers is making companies compliant with sustainable principles (known as three pillars: economic, social and environmental). It is likely that an innovating company is sustainable. According to the literature indeed, it seems to be a correlation between innovating companies and sustainability (Piccarozzi et al., 2022; Maier et al., 2020).

Consumers are likely to reward them by purchasing from and be loyal to them even though their products are more expensive. Similarly, investors may invest in sustainable companies as the latter are more appealing from the financial side: sustainability increases their value. Moreover, all economic activity is dependent and conditioned by both renewable and non-renewable natural resources of the environment (Rout et al., 2020). Therefore, their wise consumption and employment in production are a must. Recycling scrap materials, which contributes to limit the exploitation of natural resources, positively affects costs of production on which money can be saved (Horbach et al., 2012). The definition of business sustainability includes this practice. It

is the ability to generate resources with the aim to compensate factors of production (i.e. inputs), to replace used assets, and to invest to continue competing (Barbieri et al., 2010 cited in Kuzma et al., 2020). Closely related to business sustainability is the corporate ESG (Environment, Social and Governance) objectives which are being included into firms' business strategies.

For instance, thanks to the advancements in technologies, companies can now reduce and monitor carbon emissions and better manage their production processes, reducing wastes to a minimum. Sustainable production of packaging certainly is key in sustainability. With sustainable packaging, a company aims to minimize its environmental impact by reducing the packaging waste created, using sustainable materials and renewable energy (Noissue, 2021 cited in Lekesiztürk & Oflaç, 2022). Encouragement of volunteerism to involve employees in the sustainability and partnering with non-for-profit as well are sustainable practices that pursue the societal pillar. Attention to sustainability lies also in the choice of suppliers and distributors, which have to be truly sustainable in the three pillars at the same time. It may be a problem if these suppliers are not sustainable as they may negatively affect the reputation of the company itself. Recently indeed, sustainable supply chain management, which pursues environmental, social and economic goals of a firm's supply chain activities, has emerged as an approach for firms to improve sustainable results in their supply chains (Carter & Rogers, 2008, Seuring & Muller, 2008 cited in Koberg & Longoni, 2019). To mention Apple and Dell, whose employees were working in dangerous conditions or Nike and Adidas' suppliers which were dumping toxins into rivers in China.

2.7 COVID-19 pandemic: managerial implications

COVID-19 pandemic is different and unforeseen event compared to previous ones. For this reason, no clear established procedures and standards are there to direct employees' behaviors at work (Lin et al., 2021). In addition, it tested the ability of companies to manage crisis and be agile in the response of uncertainty and unexpected events, which may occur at any moment. Agility is a fundamental attribute in hard times featured with uncertainty, as discussed above. The feature allows an entity to adapt and react to external changes relatively easy.

Since the beginning of the COVID-19 virus pandemic, companies have experienced several challenges that have made their management to reorganize activities, rethink operations and daily tasks. Global supply chains shown their vulnerability: they extremely suffered during this time, as countries closed their borders to minimize the spread of the virus. What is occurring is a simplification of supply chains (Morrison, 2022), which basically consists in reshoring of business activities in home countries.

Companies not involved in the production of necessary goods (the latter adopted measures to increase health security) have been forced to close their factories due to national lockdowns. Those entities that could, started to work remotely. According to the New World of Work survey by Resources for Employers (2020) (cited in Mackenzie, n.d.), two third of respondents worked remotely. Many works in IT/technology sector, which is one of the most remote-friendly sectors. Moreover, all over the world, employees and managers had to deal with dispersed teams and distance management (Vargas, 2020 cited in Kirchner et al., 2021). Remote work has implications for management as it requires, among the others, data protection, leadership, office space, teamwork, company culture, identity and flexibility in work arrangements (KPMG, 2022). According to the literature, it has several advantages like flexibility, convenience, autonomy, trust empowerment and boosted productivity, but it may lead to a sense of loneliness and feelings of isolation among employees and managers (Hertel et al., 2005; Stich, 2020; cited in Kirchner et al., 2021). Knowledge sharing may become challenging as it is dependent on human capital, which remotely can be controlled with more difficulties. This may occur for lack of competences in communication technology. In order to solve this issue, managers and employees need to be trained, so some hours of their daily work had to be covered by training. Leadership became a dynamic process that has evolved and should change according to the individuals working from home (Kirchner et al., 2021).

As the pandemic weakened, companies are entering a new normal, a new business era, different from the one of the past. According to Dzurinda (2020), we thus should “invest in a fundamentally different post-COVID Europe, rather than restoring Europe to mirror pre-COVID times” (cited in Roth, 2021). From the experience of COVID-19 and lockdowns, their crisis management may be more responsive in the future and have business models able to adjust to next unpredictable events flexibly and quickly. Furthermore, many companies are letting employees to choose between remote work and at the office, according to their preferences. This is probable to increase their productivity and their motivation to work for their company. Organizations should be conscious of leadership, which is not as in the past just about managing people (Kirchner et al., 2021).

2.8 Industry 4.0 (I4.0): managerial implications

With the latest technologies and digital practices of the I4.0 – one of the most important external trends that is revolutionizing jobs and organization -, companies are becoming more and more digitalized, and, in the literature, the concept of smart factory has been introduced. Such factories are featured with very advanced technologies (such as robotics, Internet of Things, extensive simulation of processes) that manage interconnected systems known as Cyber Physical Systems (CPS) between its physical assets and computational capabilities (PwC, 2016). The digital foundation is cloud: for 60% of corporations cloud is the largest share of their technology investment over the last two years (EY, 2021),

At some extents open innovation is exploited being the customer active participant in the production process. I4.0 is based on up-to-date trends in management of ambidextrous, Lean, Agile and Sustainable business (Kagermann et al., 2013). Its technologies were found to mitigate COVID-19 effects on employees' performance and on supply chains (Narayanamurthy & Tortorella, 2021; Spieske & Birkel, 2021). In smart factories, training is fundamental for the effective and efficient production process (or delivery of a service). In the last decades, training has become increasingly specific due to the demand to use new technologies and the latter can support training as well. One characteristic of 4IR, also known as Industry 4.0 (I4.0), is the advancement in Information and Communication Technology (ICT), which guarantees quick and immediate flow of information among employees within the organization. Predictive maintenance, based on Artificial Intelligence, aids at intervening on, say, a broken machine or even anticipate its break. Besides, they could assist in the creation of personalized solutions for both customers and employees. Data become fundamental in I4.0, with a large amount of them to be leveraged (labeled thus Big Data). More specifically, management effort is to master the ability to mine and monetize what data contains, i.e., real business insights. This turns into a more and more important success factor in modern business.

Human resources are essential even in a digitalized setting featuring high degree of automation (Marmier et al., 2021). Necessary is to develop skills in many fields, which will lead to the evolution of jobs, such that employees can complement the technological and organizational developments of companies (Marmier et al., 2021). From a more generalist training, they have now to focus on specialized training to use advanced machines. As a consequence, companies are now introducing mandatory new training programs (EY, 2020). Sony et al. (2021) highlight the importance that adaptation to 4IR practices has on both employees and their companies. Indeed, the higher is the degree employees adapt, the likely the companies will succeed and properly use these technologies. Among the applications of Virtual Reality (VR) and Augmented Reality (AR) is training, in which diverse environments and scenarios can be simulated without involving real everyday operations. As a result, trainees can gain experience avoiding the risk of making mistakes in real operations and at the same time practice in environmental simulations. In addition to this, VR and AR can be an effective way to transfer knowledge in the company (e.g. Roldán et al., 2019). I4.0 technologies help to reach sustainability objectives. The employment of control software and hardware can provide efficient solutions for energy savings, control of emissions, machine maintenance (Garetti & Taisch, 2012), that is, it plays a part in the business sustainability of a company. An example is real time data from production and supply chain that help the allocation of resources (de Sousa Jabbour, 2018). I4.0 supports effective allocation of resources

(Bromiley & Rau, 2016). Adoption of I4.0 principles improves operational performance and supply chain competency (Chauhan et al., 2021).

The spread of the COVID-19 pandemic has implied important and major changes to industries and companies are getting used to the new normal. Organizations with more mature digital technology and automation brought by the integration of I4.0 technologies have benefited significantly from it after COVID-19 outbreak: their productivity levels have been sustained effectively despite of restrictions that forced employees to work from home (Narayanamurthy & Tortorella, 2021). According to the International Labor Organization (2020), the pandemic has sped up the digitization trend and adoption of I4.0 technologies (cited in Narayanamurthy & Tortorella, 2021). Moreover, the ICT 4.0 technologies implemented changed skills and competences that workers should have (Habánik et al., 2021). The authors found out that I4.0 technologies moderate the work conditions forced by the COVID-19 outbreak on employees' performance and that organizations simultaneously adopting I4.0 technologies as well as virtual connection practices might improve employees' performance, especially in terms of quality output. In addition to the positive effect on employees' performance, I4.0 shows promising possibilities to diminish supply chain risks (e.g., COVID-19 pandemic) (Spieske & Birkel, 2021), risks that would put great pressure on business operations and activities.

The next and last section discusses the findings and answers the two research questions.

DISCUSSION AND CONCLUSIONS

Typical management practices that used to work in the past, whereby stable market conditions prevailed should evolve. Companies need to adapt their organizations and adopt up to date management practices that can work in current changes and turmoil that are occurring in the market, represented mainly by COVID-19 pandemic (and all its consequences) and digitalization sped up by the latter and advanced technology introduced by I4.0. These practices reflect the current market context which features uncertainty and continuous strive for innovation. As such, it is crucial to opt for flexibility, agility and being lean, common traits to the current management practices. Moreover, it is key that an effective knowledge management system works for flow of knowledge (and thus new practices are welcomed in the company). The backbone of companies should be flexible and agile organizational structure. A flat organization presents the right characteristics for the aim as it is featured with a simplified bureaucracy and relative ease to take and implement decisions. It thus allows to have a realistically working knowledge management and to identify, react and adapt to opportunities, threats and changes in the environment and be open to the introduction of novel management practice. Moreover, creativity and more freedom to innovate are common to this structure. They can be enhanced among employees, who work in an organizational environment that allow them to be not afraid to fail and so be more innovative.

According to the findings, COVID-19, digitalization and sustainability significantly impact the current management trends. Organizations are indeed adapting to the new normal. The need for resilience and sustainable practices appears to be central in management. The end is to mitigate consequences of future events that affect their organizations. Furthermore, it seems that flexibility and agility assume great importance in organizations, which allow the latter to react in time to change in e.g. external environment and consumer tastes. Considered the findings in the reports and in the management literature, agility can be considered the reason why modern organizations – of which main traits are flat structures, few span of controls and simplified bureaucracy (explained in more details below) – adopt non-traditional trends.

Companies are now oriented to cross-functional teams, i.e. teams whose members come from diverse department (and/or different hierarchical positions). Thanks to its heterogeneity, organizations benefit of diverse points of view and by the sharing of knowledge among their members. Effective flow of knowledge can allow the so-called open innovation practices. This new management trend foresees the collaboration of a company with its stakeholders, it enlarges the company's R&D possibilities, by sharing costs with partner

companies and allows for new sources of revenues. In addition, the consumer participates in the production process by exchanging feedbacks on a product or service. Lean Startup practices, based on open innovation, demands training of employees to present a product not finished yet. The minimum viable product (MVP), as it is known should portray the idea of how the product will look like once completed. In case it turns out that the product is likely to fail, resources can be employed somewhere else in the company.

Sustainable practices are driven by stakeholders who are conscious of the need for sustainability to preserve resources and help the growth of communities. Nevertheless, companies can increase their performance thanks to it. Companies can achieve sustainable goals by using resources, environmentally friendly materials, reduce carbon-fossil emissions and promoting volunteering and collaborations with non-for-profit organizations; the choice of suppliers that respect sustainability principles is also key that reflects the attention to sustainability.

From COVID-19 experience, companies have been strengthening their risk management practices with the goal to be able to react to unexpected future events. Agility becomes key. Knowledge sharing is chbecome challenging as it is dependent on human capital, which remotely can be controlled with more difficulties. This may occur for lack of competences in communication technology. In order to solve this issue, managers and employees need to be trained, so some hours of their daily work had to be covered by training. Leadership became a dynamic process that has evolved and should change according to the individuals working from home (Kirchner et al., 2021). Considering work conditions, many companies have decided to leave the choice to their employees whether to continue working remotely, which may increase their productivity and motivation.

As the pandemic weakened, companies are entering a new normal, a new business era, different from the one of the past. According to Dzurinda (2020), we thus should “invest in a fundamentally different post-COVID Europe, rather than restoring Europe to mirror pre-COVID times” (cited in Roth, 2021). From the experience of COVID-19 and lockdowns, their crisis management may be more responsive in the future and have business models able to adjust to next unpredictable events flexibly and quickly. Furthermore, many companies are letting employees to choose between remote work and at the office, according to their preferences. This is probable to increase their productivity and their motivation to work for their company. Organizations should be conscious of leadership, which is not as in the past just about managing people (Kirchner et al., 2021).

Due to the 4IR, companies are now focused on a training aiming at mastering specific tasks and machines (the ones introduced by the 4IR). Traditional training is more general. The adaptability of employees to the digitalization of companies is fundamental. Thanks to VR and AR, employees can effectively learn how to do their jobs in a “safe environment” and in different scenarios. Literature suggests that 4IR has aided companies to mitigate the effects of COVID-19 on employees’ performance and on supply chain consequences of the pandemic. Moreover, green practices may be conducted thanks to software and hardware that monitor and that support allocation of resources.

Limitations and future research

This work presents some evident limitations. The main one lies in the methodology used. The list of trends was chosen according to experience, knowledge and several reports of the “Big Four” consulting firms. More trends may be identified utilizing different keywords and/or performing it in different databases. Future studies may detect more current trends through questionnaires sent to different companies. This article may be used as a starting point for similar studies (even for specific aspects of management).

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