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The effect of COVID-19 on human resource management practices and organizational sustainability

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ABSTRACT

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The current study tries to identify the impact of COVID-19 on human resource management practices, business processes, and organizational sustainability. Furthermore, it identified the impact of sustainable HRM practices on hypermarkets' sustainability. The outbreaks of COVID-19 have considerably impacted organizations and businesses all over the world. Most companies were not ready to face such force majeure. Moreover, like everywhere else in the world COVID-19 has significantly affected HRM functions and organizational sustainability in the organizations in Gulf Cooperation Council (GCC) countries. The research is based on a survey of 363 HR practitioners working in hypermarkets in the GCC countries to examine the impact of the pandemic COVID-19 on organizational sustainability. The findings reveal the negative impact of COVID-19 on human resource management practices, business processes, and organizational sustainability. Furthermore, they identify the positive impact of sustainable HRM practices and effective business processes on hypermarkets' sustainability. Finally, the results show that effective business processes and sustainable HRM practices annihilate the negative effect of COVID-19 on organizational sustainability in hypermarkets operating in the GCC countries. This study is unique since it is conducted during the pandemic period and analyses the negative impact of Covid-19 on organizations in the GCC countries. Moreover, it suggests solutions to minimize the negative effect of COVID-19 on organizational sustainability.

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1. Introduction

As compared to the global economic crisis in 2008, the pandemic of COVID-19 is related to various novel challenges, provided that focal financial activities have been muffled. The magnitude of COVID-19 outbreaks spread around the world has triggered a greater level of uncertainty about investment and consumption among diverse interest groups, which includes investors, suppliers, business partners, and consumers (Donthu & Gustafsson, 2021; Verma & Gustafsson, 2021). Elevating the travel sanctions and lockdown period (both globally and domestically) are severely impacting the general economic scenarios. The crisis of COVID-19 is producing spillover repercussions across the regional and global supply chains and disrupting both supply and demand patterns (Pantano et al., 2020). Moreover, the policies covering social (physical) distancing have almost devastated service industries including hospitality, travel, and tourism, which could generate a recession (Donthu et al., 2021). The severe worldwide challenges triggered by COVID-19 outbreaks could be managed by adopting a framework of digitalization ranging from IoT (Internet of Things) to AI (Artificial Intelligence), Big Data analytics, and BlockChain (Donthu et al., 2021). The outbreaks of COVID-19 have impacted around 3.3 billion organizational personnel across the globe. People are unable to work due to their self-quarantine or isolation. The lockdown resulted from the pandemic COVID-19, firms have increased working hours and layoffs and mitigated compensation and rewards (Dey & Loewenstein, 2021). Several organizational incumbents have been impacted by the loss of income or low wages. Industries, for instance, retail, * Corresponding author E-mail address <u>s.adzic@famns.edu.rs</u> (S. Adžić)

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manufacturing, food services, travel and tourism, and managerial and business processes are at a greater risk of underemployment and unemployment (Bell & Blanchflower, 2020). Undoubtedly, the pandemic COVID-19 is disrupting the economies of several countries by mitigating business activities across various industries, leading to reductions in employment, and mitigating income streams for various businesses (Dey & Loewenstein, 2020; Woodside, 2021).

This force majeure brought many challenges for companies operating in the Middle East and MENA region. According to a survey conducted by the UAE chamber, 1228 out of 245,000 organizations in Dubai during April-2020 when the lockdown measures were at their peak were thinking that this lockdown will swell, and businesses will suffer. However, few sentiments were there sporting the argument that this situation will be settled down soon and they will revive their business in the new normal situation.

The pivotal contribution of this study is to comprehend the unique sustainability framework for organizations in GCC and MENA regions during the crisis of COVID-19, i.e., an "organizational effectiveness and sustainability frameworks". Furthermore, this empirical investigation adds to the available literature by amalgamating the key hallmarks of the successful organizations that have formerly adopted to not only sustain their operations but thrive during the post-crisis period (Baloch et al., 2020). The economic catastrophe portrayed various obstacles, and a new taxonomy inside the crisis economy entitled "Pandemic Economy" must be comprehended (Barreiro et al., 2021). Consequently, the key emphasis of this empirical investigation is to examine the ramifications of the COVID-19 crisis on organizational HRM practices and sustainability framework in the GCC region. The newly emerged phenomenon lacks theoretical and empirical studies that justify the significance and worth of this empirical investigation. To establish a truly adaptive and sustainable economy, it is imperative to establish and manage unique constructs at the organizational level, which are increasingly ambiguous and sophisticated during the era of COVID-19 (Obrenovic et al., 2020). There is a dearth of organized discussions in existing studies regarding how to deal with the dilemmas of e-HRM, sustainability, and organizational business processes in the hypermarkets located in the GCC and the Middle East regions (Al-Youbi et al., 2020).

Overcoming this gap presents a robust foundation for a study on the role and recovery of different predictors that stems from management science taxonomy, i.e. change management, technology and digitalization, sustainability, leadership, human capital, service innovation, organizational culture, business processes, and organizational success (Barreiro et al., 2021) Our study tries to identify the impact of COVID-19 on the organizational sustainability and whether the key organizational factors, such as sustainable human resources practices and effective business processes can reduce the negative effect of the pandemic on the organizational sustainability.

This paper consists of three sections. Firstly, we will analyze the literature on the relevant concepts, such as COVID-19, organizational sustainability, effective business processes, etc. Secondly, we will present the methodology and results. Finally, we will elaborate on the limitations of our results and propose recommendations for further studies.

2. Literature Review

2.1. COVID-19 Business Processes & Organizational Sustainability

Management sciences comprehend crises in terms of organizational and political dilemmas. Few of the vulnerabilities that prevail in society could be fixed by incorporating effective strategic and leadership development plans (Bartik et al., 2020). By executing strategic planning frameworks firms can remove a few threats and eliminate the consequences of negative incidents by maintaining a greater level of control over their destiny. Apart from handling several crisis management stages such as diagnosis, preparation/prevention, containment, recovery, and comprehension, such frameworks also provide mechanisms towards developing organizational sustainability (Blokker et al., 2019; Foo et al., 2020).

The notion of sustainable development is adopted to justify the mitigation of vulnerabilities and the reduction of crisis repercussions (Lozano & Garcia, 2020; Batista & Francisco, 2018). Whereas it is seldom acknowledged that reduction does not essentially demand an emphasis on the linkages between the environment and a crisis. Barreiro (2021) demonstrated that the developmental frameworks that exhibit an impact on the environment and enhance organizational exposure to disasters are getting prominence (Lozano, 2018). Crisis and disasters exhibit turbulent scenarios and highlight the diverse relationships between natural systems and human beings (Amankwah, 2020).

Despite the economic downturn that negatively affected organizations across the globe, certain organizations have been capable of sustaining their business operations and even flourish during the crisis period. The manager's ability to effectively manage a crisis, manipulate wide-ranging opinions and eagerly comply with the benchmarks to optimize the implications of decreasing measures. Besides, it enhances the readiness of the jurisdiction and mitigates the vulnerabilities as well. Firms that swiftly adapt and respond to unanticipated threats are characterized by transformational leadership, less interdependence, distributed networks, networked structure, flexibility, and straightforward guidelines (Ganatra, Hammond, & Nohria, 2021).

The key to the swift and successful recovery of several enterprises is tagged to change management (Queiroz et al., 2020; Majumdar et al., 2020). When several firms have been terminating their personnel, Papa John's and Pizza Hut have been

employing tens of thousands of incumbents (Ivanov, 2020). Moreover, gyms and fitness firms, such as; Planet Fitness and YMCA have transitioned towards online platforms, offering workouts, nutrition, and services of online classes. Nike is waiving monthly premiums concerning the online subscription to dietary guidance and training courses during the unprecedented period (Papadopoulos et al., 2020). COVID-19 Healthcare Coalition, formed by private sector organizations including hospitals, medicine companies, and tech firms, to optimize resources to cope with the pandemic virus (Gostin, & Wiley, 2021). Besides, 3M, General Electric, and Ford are partnering to manufacture sophisticated medical appliances such as ventilators and respirators. Biometrica and Abbott shifted their endeavors into performing COVID-19-related screening and testing, L'Oreal, a prominent cosmetic producer is using their production lines for manufacturing hand sanitizers (Guerrieri et al., 2020). Successful cases exhibit how indulging in agile and unique frameworks of doing business could facilitate enterprises to adopt swift adjustments with changing demands and consumer buying behaviors aiming to not only sustain their operations but also transform themselves and lead the market (Kuckertz et al., 2022). As evident from the mentioned cases, despite rightsizing or slowing down business processes, companies kept investing in technology, innovation, and human capital for attaining sustainability during pandemic adversities.

Services must be reachable to the clients whose everyday routine is cut because of maintaining social distance (Bartik et al., 2020). It can be achieved using online platforms for goods and services delivery. Mckinsey reported that the firms characterized by a virtual and networked structure, having adaptive and flexible culture, modern internet technologies and digitalization, and economic contingency frameworks could sustain their business during the epidemic and pandemic COVID-19 crisis (Seetharaman, 2021). Based on the preceding studies following hypotheses are proposed:

- Hypothesis 1: COVID 19 Significantly impacts organizational sustainability.
- Hypothesis 2: COVID 19 Significantly impacts business processes.

2.2. Mediating Role of COVID-19 between Business Processes and Sustainability

Beyond the humanitarian disaster of the pandemic COVID-19, the virus is also having an increasing repercussion on both global and domestic economies. Uncertainties created the unexpected implications of the pandemic with a significant impact on the top economies across the globe. Several economies are contemporarily predicting recession (GDA, 2020). The pandemic disaster threatens organizational processes and performance accomplishments (Kuckertz, Reyes, & Berger, 2022). The prevailing turmoil is impacting businesses from fragmented routines, structures, and competencies (Williams et al., 2017). To handle a disaster effectively, unfortunately preparation is inevitable, and few organizations would have been equipped for a disaster concerning the extent of the pandemic COVID 19 (Kuckertz et al., 2022).

The limited number of research related to crisis management and entrepreneurial resilience emphasized the pre-disaster era and, on the resources, and competencies that firms and entrepreneurs establish aiming to confront and adapt to catastrophic events (Doern et al., 2019; Korber & McNaughton, 2018). Normally, certain hallmarks of innovative organizations must enable them to effectively prepare for mitigating the repercussions of any force majeure. Being innovative is a prerequisite to being resilient, as innovative organizations tend to predict and adjust to a wide-ranging crisis (Linnenluecke, 2019) continuously and consistently. Whereas firms do not always identify the real threat that a potentially disastrous event involves (Muñoz, Kibler & Farny 2019) and most of the firms will not have been equipped for the happenings at the eleventh hour. It is conceptualized from the studies conducted on the repercussions of Hurricane Katrina that a preparation failure could have severe implications, more specifically on smaller firms that are vulnerable to disrupted cash flows, and with significant infrastructure-related obstacles (Kuckertz et al., 2022).

The COVID-19 impacted society at the micro and macro levels, and its societal and economic implications are unprecedented (Finsterwalder & Kuppelwieser, 2020). Both private and public sector enterprises in GCC and the Middle Eastern region are facing challenges of operational disruption because of the current pandemic (Cortez & Johnston, 2020; Kabadayiet al., 2020). Strong Managerial emphasis is needed to evaluate how such disruption impacted both organizational personnel and clients (Klaus & Manthiou, 2021; Langet al., 2021; Sheth, 2020; Tuzovic & Kabadayi, 2020). Undoubtedly, service innovation enhances prevailing organizational services and establishes novel ways to mitigate the repercussions of the pandemic crisis. This force Majure provoked astonishing interest in innovation. Firms often experience disruptive alterations related to their operating frameworks that arise at a comparatively deliberate pace and with uneven repercussions.

Contemporary research reviews about the service and service innovation relative to organizational business processes mainly illustrate the state of the art before the pandemic COVID-19 (Heinonen & Strandvik, 2020). Few of these reviews segregate service innovation in terms of fundamental epistemologies and assumptions; for instance, Helkkula et al. (2019) specified four archetypes: process-centric, output-centric, systematic and experiential, highlighting hallmarks, actor and frameworks configurations. Kowalkowski and Witell (2021) predict that such archetypes will prevail.

As exhibited from the contemporary scenarios of research covering service innovation, Gustafsson et al., (2020) asserted reservations regarding the diversity regarding pedagogies and perceptions and the scarcity of collective research. In their review of service innovation and design research, Antons and Breidbach (2018) observed this diversity and asserted that distinct concepts must be amalgamated to examine, for instance, how dynamic competencies enable firms to indulge in service

innovation and the development of innovative business processes. Furrer et al. (2020) evaluated research themes regarding service innovation for more than 27 years and again asserted the diversity of research themes. Their analysis specified a significant focus on organizational and operational dilemmas.

Such reviews of the literature illustrate service innovation literature as diverse in terms of both pedagogies and concepts but empirically narrow in scope and implications (Chesbrough, 2020). It has been noted that a strategically articulated lens could ensure the provision of a more wide-ranging account of service innovation beyond recent theorizing and that such strategic orientation is required relative to current situations of pandemic disruptions. Disruption is an essential concept relative to strategic management, for instance, studies on dynamic abilities (Strandvik et al., 2020; Baden-Fuller & Teece, 2020) and organizational management sense-making (e.g., Hamel & Prahalad, 1994; Ågerfalk et al., 2021) managerial sense-making (e.g., Hamel and Prahalad, 1994) exhibit the significance of observing and responding to changing scenarios by "sensing opportunities and persuading others that such opportunities are worth pursuing speedily with the resources at hand supplemented by those of alliance partners" (Baden-Fuller & Teece, 2020, p. 2).

Likewise, a contemporary management-driven model for the development of value propositions embraces strategic consideration of the harmony between business processes and customer requirements in dynamic markets (Payne, Steinhoff & Eggert, 2020). While in normal circumstances, service provisions and business frameworks are developed and adjusted relative to the customers and industrial rivals. During the era of intense market disruption, both business models and service provisions become obsolete as a repercussion of alterations in the process of value creation and consumer behavior. Consequently, it becomes a dilemma of urgency to confront management consultants' approaches in pursuit of a robust response at the strategic level.

The previous literature regarding strategic management revealed that the sense-making of the firm's management consultants significantly contributed to responding to market-driven disruptions (e.g. Baden-Fuller & Teece, 2020). The notion of imposed service innovation illustrates the developmental and progressive practices needed after severe disruptions resulted from the change in the surroundings. This term reflects crucial and imposed responses to unforeseen and sudden market disruptions that need restructuring and transformation of both business frameworks and service provisions.

On the other hand, existing literature on service innovation has generally emphasized discretionary service innovation, which is entirely contradicted; as a proactive response to sudden fluctuations relative to the surrounding marketplace and organizational context, such types of innovations resulted from the growth and diversity incentives and are originated through the firm's discretion coupled with minimal immediate time restrictions. While the term-imposed service innovation presents a unique strategically articulated lens that informs this empirical taxonomy of service innovations provoked by the pandemic COVID-19.

Service innovation has often been regarded as a focal predictor relative to organizational growth and differentiation (Li, Guan & Xing, 2020; Kowalkowski & Witell, 2020) and a dilemma of managerial discretion. We oppose here that a disaster like COVID-19 shifted the paradigm from discretionary to enforced activity, generally to ensure the firm's resilience and survival. This has relatively dramatic repercussions, optimizing service innovation to a focal strategic dilemma. Executing a strategic lens to service innovation in the contemporary disruptive climate, we have developed a theoretical framework to capture how firms responded to the contemporary global disaster.

The current empirical investigation sought to articulate and examine the impact of the pandemic COVID-19 on organizational processes based on service innovation. We asserted that a disaster like a recent pandemic accelerated imposed innovation not because firms wanted to innovate, but because they had to. Concerning the strategic perspective, imposed service innovation in business processes decreases negative repercussions by engendering change across mindsets and triggering business horizons that would not have been addressed under normal conditions (Nenonen & Storbacka, 2020).

- Hypothesis 3: Effective business processes significantly impact organizational sustainability.
- *Hypothesis 4: Effective Business Processes mediate the relationship between COVID-19 and Organizational Sustainability.*

2.3. The Negative Impact of COVID-19 on HRM Practices

The circumstances when a few types of new pandemic virus or new stream of infection emerge are likely to occur again. Firms must be equipped to swiftly respond, and their plan of action should be prepared. It has been documented by Yildirim and Korkmaz (2017) that a firm's HR management effectiveness and team formation is the focal predictor of organizational performance and sustainability in the long run. To be capable of effectively performing and embracing adequate personnel management approaches, a firm's managers require to comprehend also the personnel perspective (Vnoučková, 2020).

The pandemic of COVID-19 has disrupted the place of work, job tasks, and employment demands. It has been suggested that such alterations exhibit sophisticated obstacles and critical strain on the personnel in terms of inadequate performance, demotivation, job dissatisfaction, sick leave, and turnover (Caligiuri, Verbeke & Zimmermann, 2020). The majority of the

Based on the survey administered on the public sector's telecommuters, we may argue that telecommuting is related to a significantly lower level of happiness at the workplace and intention to stay at the workplace, where personnel are grateful rather than choose to work from home (Carnevale & Hatak, 2020). Besides, public sector personnel currently often have to work from home throughout the week. It has been evident that such telecommuters exhibit a greater level of engagement with their firms where personnel occasionally work from home but are still capable of coordinating face-to-face- interaction with their peers and immediate managers during other times (Gallup 2017). It has been found various benefits associated with telecommuting, which include a high level of sense of freedom at the workplace in terms of planning and work scheduling (Schuster, Fukuyama & Kay, 2020).

The pandemic of COVID-19 is likely to focus and intensify the expenditures incurred in telecommuting. Five days of telecommuting in a week during the pandemic significantly constrains the dilemma of social interactions among co-workers and colleagues (Hite & McDonald, 2020), risking the social and professional isolation of organizational personnel (De Vries & Bekkers, 2018; Buffer 2020). As the sudden paradigm shift resulted from the recent wave of the COVID-19 virus, most of the preparatory moves exhibit sound guiding principles relative to effective working from remote locations, for instance, ensuring adequate and protected remote workstations, providing training regarding virtual collaborative climates and technical gadgets aiming to ensure the desired goals pursuits (McKinsey 2020). In recent work settings, public sector organizational personnel are experiencing plenty of unmet demands when it comes to their remote resources and workstation for performance accomplishments. This belongs to all the developing nations with restricted energy supply and internet connectivity.

At the same time, managers of public sector organizations also face sophisticated obstacles. They are unable to supervise until or unless organizational personnel are physically present at the workplace. More specifically, in the developing regions of the world where tendencies relative to employee corruption and moonlighting have already been evident before the recent pandemic of COVID-19 (Kaushik & Guleria, 2020), this exhibits critical obstacles relative to surveillance and monitoring. Furthermore, supervisors are required to motivate, lead and communicate remotely, and make sure that harmony between organizations and telecommuters stays intact while working from remote locations.

It has been evident that an essential minority group at the workplace finds "staying motivated" problematic when telecommuting and almost half are in contact less than once a day with their seniors when telecommuting (Buffer 2020; Jiménez-Pavón & Lavie, 2020). Moreover, job tasks and requirements generally alter with telecommuting. The citizen-centric job nature of the public sector personnel currently demands virtual and remote interactions. An incumbent, for instance, from the national bureau of statistics obtaining household data, may (learn to) flourish virtual interviews through Zoom or Google Meetup rather than face-to-face household surveys.

A physical therapist is currently required to ensure the provision of video-driven diagnoses and treatment from a remote location. The comprehension of these changing work scenarios comes at a time when public sector organizations are characterized by heavy workloads in recent work settings (Pan & Zhang, 2020). The modifying nature of jobs along with minimal direct contact with immediate supervisors could bring ambiguousness relative to which incumbents have exhibited compliance with their roles, objectives, and tasks and the expectations exerted by the immediate managers about them when working from remote locations.

It is also significant to comprehend that requirements stemming from the external work climate have also changed. Due to the closure of schools and childcare centers, personnel of public sector organizations may be required to perform both work and childcare duties in groups at the workplace (Baloch et al., 2020). The increasing tendency of sick leaves resulted from the contracting of COVID-19 virus by the personnel or their dependents, which consequently, optimizes anxiety and issues relative to the mental health of the incumbents, this, in turn, increased the workloads in the lesser number of available organizational incumbents.

Conceptualizing such alterations cumulatively based on the lens of employment demands-resources theory (Bakker & Demerouti 2014), projections are dreadful. Employment demands have increased across various organizations of the public sector, while resources relative to jobs, for instance, managerial support or provision of technical gadgets coupled with personal resources (i.e. resilience and optimism) will have affected. If the predictions relative to the employment demand-resources framework are authentic, we could anticipate the minimal level of personnel engagement level at the workplace (Carnevale et al., 2020), increased level of burnout (e.g., Blokker et al. 2020), the greater level of sickness-driven absenteeism (e.g., Clausen et al., 2012) and decreased level of workplace performance (e.g., Bakker, Demerouti, & Verbeke 2004).

It has been observed that a higher level of PSM (Public Service Motivation) exerted by the personnel of the public sector could shelter public sectors to some degree from such negative implications (Perry & Wise 1990). If self-sacrifice ever mattered as a significant predictor of the greater level of work attempts, it is currently during a pandemic (Schuster, Fukuyama & Kay, 2020). There have been significant constraints in this regard. Although not all personnel of the public sector possess

a higher level of PSM. In recent work settings, the higher level of PSM exerted by public sector personnel is significantly related to burnout: personnel of the public sector sacrificing themselves "too much" for society (Baloch et al. 2020).

Even before COVID 19 outbreak, research showed that focusing on psychosocial features of working context, which is the main task of sustainable HRM, contributes not only to individual development but also organizational development (Arcangeli, et.al, 2017; Di Fabio, et. Al, 2018). Sustainable HRM can be defined as creating people-centered HRM policies and procedures to improve organizational performance (Manuti, et. Al, 2020). Continuous research found that supportive and sustainable HR practices have a positive effect on the motivation, engagement, and commitment of employees. In this paper, we also tried to analyze the influence that COVID 19 had on sustainable HRM practices,

Hypothesis 5: COVID 19 negatively impacts sustainable HRM practices.

2.4. Mediating Role of HR Practices between COVID-19 & Sustainability

The pandemic of COVID-19 is one of the biggest challenges to face society in generations. The public sector besides responding and managing the crisis also has to be focused on reducing employees' depression that arises from the typical routine of governmental processes. In financially stable countries, well-being administrators are processing extraordinary numbers of requests relative to social assistance and professionals are drafting policy directives to mitigate financial damage (Cohen 2020). While in developing nations, governmental agencies are managing the provision of significant items to the deprived community including medicine and food as net systems of social safety collapse (Arunachalam, Scott & Wagh, 2020).

A swift response to the such pandemic of COVID-19 hence needs an efficient administration in this regard. Efficient administration in turn significantly relied upon the endeavors and capabilities exerted by the millions of front-line personnel of the public sector organizations to the central administration. Although COVID-19 has essentially modified where and how the public sector's personnel perform, the requirements relative to their employment placed on them, and the requirements they experience from their external organizational context.

Relative to this viewpoint, we initially draw on previous research to demonstrate the stress that such alterations put on the personnel of public sector organizations, the specific obstacles faced by the personnel, and the outcomes these will have for, among others, turnover, sick leave, job dissatisfaction, and poor performance if they remain unresolved (Kuckertz et al.,2022). The pandemic of COVID-19 has developed a specifically problematic work climate relative to the HR management perspective _ with management consultants having to swiftly venture into the "unknown unknowns" as they endeavor to assist their incumbents to deal with and adapt to significant changes happening in both social and work climate. For instance, organizational personnel who previously spent all or plenty of their time working inside their firm's physical premises have to adjust swiftly to working from remote locations.

It is due to shelter-in-place orders closure of non-essential businesses, even those who could be more able to exhibit flexibility to work from remote locations or as freelance workers are currently experienced with their unique obstacles resulting from their inability to locate alternative work arrangements (for instance, co-working spaces, libraries, cafes, etc. from outside of the home itself. Aside from the enhanced incapability to detached work and personal life, the closure of child-care services and schools has optimized parental needs for workers, which consequently, blurs the lines between family-to-work spheres (Kuckertz et al., 2022).

The contemporary scenario about essential intervention to restrict the spreading of the COVID-19 virus mainly affects various domains of professional life across the globe. It is likely to perceive a significant paradigm shift towards telecommuters, freelance workers, home-centric workstations, and distant workgroups. It is challenging to comprehend the contemporary alteration only negatively. It has been asserted by Beno (2018) that home-based workstations exert a positive impact on the personnel experience relative to work. However, we could conceptualize other manipulations that will exhibit a potential impact on organizations' sustainability and performance in the long run (Vnoučková et al., 2020). As we already said, many changes occurred at the workplace due to the COVID-19 pandemic. Employees are faced with layoffs, increased working hours, remote working, temporary or even permanent production interruption, etc.

The work-family amalgamations have specifically affected employees with kids putting a lot of pressure and stress on them. However, the new work arrangement hurts childless or single incumbents as they could be at the highest risk of solitude, a felt inadequacy of purpose, and related unfavorable implications on well-being (Achor et al., 2018). As we already said, sustainable HRM practices increase employees' motivation, engagement, and performance. Therefore, another focal objective of this empirical investigation is to analyze the impact of sustainable HRM practices on organizational sustainability. The implication of organizations' HRM practices during the outbreaks of COVID-19 will be far-reaching. In this paper, we will emphasize the significant implications of sustainable HRM practices on organizational sustainability during the pandemic of COVID-19.

• Hypothesis 6: Sustainable HRM practices significantly impact organizational sustainability.

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• Hypothesis 7: Sustainable HRM Practices significantly mediate the relationship between COVID-19 and Organizational Sustainability.

3. Theoretical Framework

The theoretical framework shown in Fig. 1 is portraying the connectivity of independent, mediating, and dependent variables.

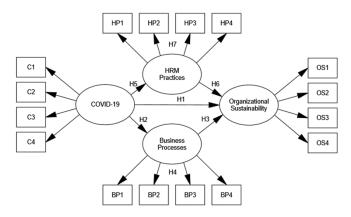


Fig. 1. Theoretical Framework

3.1. Research Methodology

A closed-ended questionnaire was distributed among the HR practitioners working in the hypermarkets of the Gulf Cooperation Council (GCC) countries to examine the impact of the pandemic COVID-19 impact on organizational sustainability. Using a stratified random sampling technique 600 HR professionals were approached using email ids for primary data collection, 363 responded between December 1st, 2021 and July 2nd, 2022. In addition to the questions for collecting demographic information, 16 closed-ended items employing a 5-point Likert scale were used to collect data for study variables. From the obtained sample of 363 respondents, 193 were male and 170 were female. The responses related to organizational size were 155 from organizations having (1 to 100) employees, 135 having (101 to 500) employees, 73 from organizations having (501+) employees. During COVID-19, 64 percent of the respondent companies started delivering services online, while 36 percent of companies were doing online services before the outspread of this force majeure.

4. Results and Findings

The proposed theoretical model was tested using Structural Equation Modelling (AMOS-SPSS). In Fig. 2, circles represent latent variables, and rectangles measure variables. There were no missing values, and no items were skewed or kurtosis.

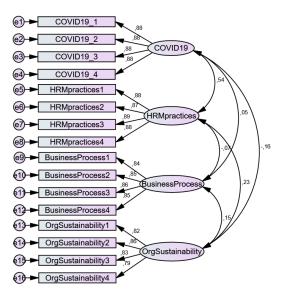


Fig. 2. Structural Equation Modelling

When we ran exploratory factor analysis, the KMO value showed that the sampling was appropriated since KMO was .882 and Sig.= .000. A four-factor model explains 74.012 of the variance and all communalities are above .630. There were no strong cross-loadings and in Factor Correlation Matrix all values are below .522. All Cronbach's alpha coefficients are above 0.70 (ranging from 0.895 to 0.932). For all factors AVE was above 5 and CR was ranging from 0.895 to 0.913 which is above the minimum threshold, i.e. 0.70. From everything mentioned above, it is clear that the hypothesized model fits well to the data (RMSEA=,000 CFI=1,000 CMIN=93,263 DF=98) (Table 1).

Table 1

Confirmatory Factor Analysis

	ŭ	AVE	MSV	MaxR(H)	BusinessProcess	COVID19	HRMpractices	OrgSustainability
BusinessProcess	0.913	0.723	0.023	0.913	0.851			
COVID19	0.932	0.774	0.288	0.932	0.051	0.880		
HRMpractices	0.932	0.775	0.288	0.933	-0.068	0.537	0.881	
OrgSustainability	0.895	0.681	0.052	0.897	0.151	-0.156	0.229	0.825

After confirming the theoretical model and scale reliability, the confirmation of hypotheses was undertaken. The statistical analysis that we used to confirm the hypotheses were the following: (1) a "static" methodology, contrasting the mean differences relative to the responses of a few groups at a specific period (using the Kruskal–Wallis test), emphasizing towards a specific construct, for instance, size of the organization, firm's type and years of working, etc.; (2) a "Regression" analysis is used to examine the impact of predictor construct (COVID-19) on response variables (firm's HRM practices, business processes, and sustainability); (3) a "dynamic" framework contrasting the conditions relative to each group before and during COVID-19 and quantifying the differences, for instance, the time associated with survey's administration.

Table 2

Correlation Matrix 1

	OS	COVID-19	HRP	BP	
Organizational Sustainability (OS)	1				
COVID19	-0.765*	1			
HR Practices	0.871*	-0.921*	1		
Business Processes	0.709*	-0.896*	0.883	1	
*(n < 0.5)					

* (p<.05)

The Pearson correlation was run to assess the relationship among four variables (Table 2). It was discovered that there is a statistically significant negative correlation between COVID-19 and an organization's sustainability, HR practices, and effective business processes. Moreover, there is a significant positive correlation between effective business processes and HR practices, and organizational sustainability.

4.1. Regression Analysis: Organizational Sustainability (OS) as a dependent variable

To test the H1, H3, and H6 (H1: COVID 19 significantly impact organizational sustainability; H3: Effective business processes significantly impact organizational sustainability and H6: HRM practices significantly impact organizational sustainability), we used linear regression and organizational sustainability (OS) was a dependent variable.

Table 3		
Correlation	Matrix	2

	β	R ²	Sig.	
COVID-19	-0.322	0.529	0.009	
Sustainable HRM Practices	0.426	0.624	0.004	
Business Process	0.337	0.561	0.011	

As it can be seen in Table 3, we have identified that COVID-19 has a negative significant effect on organizational sustainability (p=.009) accounting for 32% of the variation in organizational sustainability with adjusted $R^2 = 52.9$ %, a medium-size effect according to Cohen (1988). Also, effective business processes significantly contribute to organizational sustainability (p=.011), accounting for 33.7% of the variation in organizational sustainability with adjusted $R^2 = 56$ %, a medium-size effect according to Cohen (1988). Finally, sustainable HRM practices significantly contribute to organizational sustainability (p=.011) accounting for 42.6% of the variation in organizational sustainability with adjusted $R^2 = 62.4$ %, a high size effect according to Cohen (1988). Our results indicate that all three hypotheses (H1, H3, and H6) are supported.

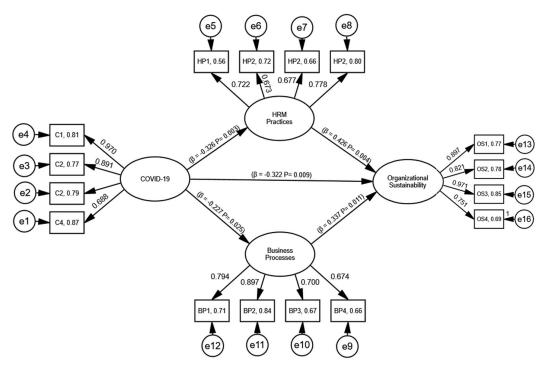


Fig. 3. Structural Equation Modelling

4.2. Regression analysis: Sustainable HR practices (dependent variable)

To test the fifth hypothesis which attempts to determine whether COVID-19 negatively impacts HRM practices data is regressed and sustainable HRM practices are used as a dependent variable.

We have identified that COVID-19 has a negative significant effect on HRM practices (p=.003) accounting for 32.3% of the variation in organizational sustainability with adjusted $R^2 = 60$ %, a high-size effect according to Cohen (1988). Therefore, we can conclude that our H5 is confirmed.

4.3. Regression analysis: Business Process (dependent variable)

To test H2, which reads as follows: COVID 19 significantly impacts business processes, we used regression analysis and effective business processes are used as a dependent variable.

We have identified that COVID-19 has a negative significant effect on business processes (p=.025) accounting for 22.7% of the variation in organizational sustainability with adjusted $R^2 = 41$ %, a medium-size effect according to Cohen (1988). Therefore, we can conclude that our H2 is confirmed.

4.4. Mediation Analysis

In this study, we used Baron and Kenny's (1986) four-step approach to testing the H7 and H4 hypotheses. As we can see from the previous results there is a significant relation between sustainable HRM practices and organizational sustainability ($\beta = .624$, p= .004), there is a significant negative relationship between COVID-19 and organizational sustainability ($\beta = .322$, p= .009) and there is a significant negative relationship between COVID-19 and sustainable HRM practices ($\beta = .322$, p= .009). Since all of these three relationships are significant, we are allowed to test the mediation effect of sustainable HRM practices.

The results of the first mediation analysis show that sustainable HRM practices still have a significant effect, ($\beta = .304$, p= .007), i.e. an indirect effect of mediation is significant. The beta value of COVID-19 is still negative and it increased from β = -.322, p= .009 to β = -.411, p =.161. However, the effect of COVID-19 on organizational sustainability is no longer significant and we can conclude that the result supports full mediation. Therefore, we can say that H7 is confirmed, i.e. effective business processes mediate the relationship between COVID-19 and organizational sustainability.

To discover whether effective business processes mediate the relationship between, we conducted the second mediation analysis. We have already seen that there is a significant relation between effective business practices and organizational sustainability ($\beta = 0.337$, p= .011), a significant negative relationship between COVID-19 and organizational sustainability ($\beta = -.322$, p= .009) and there is a significant negative relationship between COVID-19 and effective business practices ($\beta = -.322$, p= .009) and there is a significant negative relationship between COVID-19 and effective business practices ($\beta = -.322$, p= .009) and there is a significant negative relationship between COVID-19 and effective business practices ($\beta = -.322$, p= .009) and there is a significant negative relationship between COVID-19 and effective business practices ($\beta = -.322$, p= .009) and there is a significant negative relationship between COVID-19 and effective business practices ($\beta = -.322$, p= .009) and there is a significant negative relationship between COVID-19 and effective business practices ($\beta = -.322$, p= .009) and there is a significant negative relationship between COVID-19 and effective business practices ($\beta = -.322$, p= .009) and there is a significant negative relationship between COVID-19 and effective business practices ($\beta = -.322$, p= .009) and there is a significant negative relationship between COVID-19 and effective business practices ($\beta = -.322$, p= .009) and there is a significant negative relationship between COVID-19 and effective business practices ($\beta = -.322$, p= .009) and there is a significant negative relationship between COVID-19 and effective business practices ($\beta = -.322$, p= .009) and there is a significant negative relationship between COVID-19 and effective business practices ($\beta = -.322$, p= .009) and there is a significant negative relationship between COVID-19 and effective business practices ($\beta = -.322$, p= .009) and the significant negative relationship between COVID-19 and effect

-0.227, p= .025). Since all of these three relationships are significant, we are allowed to test the mediation effect of effective business practices.

The results of the mediation analysis show that effective business practices still have a significant effect, ($\beta = 0.201$, p=.013), i.e. an indirect effect of mediation is significant. The beta value of COVID-19 is still negative and it increased from $\beta = -.322$, p=.009 to $\beta = -.504$, p = .701. However, the effect of COVID-19 on organizational sustainability is no longer significant and we can conclude that the result supports full mediation. Therefore, we can say that H4 is confirmed, i.e. effective business processes mediate the relationship between COVID-19 and organizational sustainability.

5. Discussions & Conclusion

Undoubtedly, the pandemic of COVID-19 has already had rippling, dramatic repercussions across the worldwide financial activities in every region of the globe (Bofinger, Südekum & Mauro, 2020). Aiming to flatten the curve relative to rates of infections, various economies around the globe have imposed extensive restrictions (for instance, closure of schools, businesses, and physical storefronts, quarantines, and lockdowns) aiming to ensure the protection and smooth functioning of healthcare organizations (Michie & West, 2020). Comprehensibly, such types of closures had enormous, instant implications on the financial activities in almost every sector and industry across the globe, more specifically, in the GCC and MENA regions. For instance, activities concerning direct physical interaction between service providers and consumers have been adversely impacted resulting from the social (physical) distancing and movement-related restrictions (Giritli Nygren & Olofsson, 2020).

During the crisis of COVID-19, organizations are functioning more swiftly aiming to ensure their competitive edge over the market (Lee, Venkataraman, Heim, Roth, & Chilingerian, 2020). To overcome evolving challenges, organizations are embracing frameworks and pedagogies which are dynamic and responsive rather than reactive to the disaster (Chesbrough, in press), and they are shifting towards novel and innovative management frameworks by emphasizing the consumer and facilitated by adequate governance (Graves & Karabayeva, 2020; Lee et al., 2020). They are swift and dynamic relative to deciding where to shuffle and reallocate their resources. Moreover, organizations are pushed to formulate novel and innovative goods and services and drastically adapt, aiming to remain productive, agile, and visible (Chesbrough, impress & Kim, 2020).

Our study identifies the negative impact of COVID-19 on human resource management practices, business processes, and organizational sustainability. Furthermore, it identifies the positive impact of sustainable HRM practices and effective business processes on hypermarkets' sustainability. Finally, the results show that effective business processes and sustainable HRM practices annihilate the negative effect of COVID 19 on organizational sustainability in hypermarkets operating in the GCC countries. Moreover, COVID 19 didn't have a significant negative effect on organizational sustainability in the hypermarkets where effective business processes and sustainable HRM practices were introduced.

The results of our study are in correspondence with recent studies. One study conducted in China shows that companies that had better business performance, service innovation, and corporate social responsibility performance before the pandemic, managed to maintain stability when the pandemic occurred (Huang et al., 2021). The study also revealed that those companies managed to recover more quickly. Another study also discovered that organizations that have more resilient and effective business processes resisted the crisis caused by COVID 19 pandemic more easily and had a more positive effect on both economic and social sustainability (Rai et al., 2021). Moreover, the same study identified that sustainable HR practices create an organizational culture where both employers and employees can rely on each other, develop and maintain sustainable values, and help organizations overcome crises.

It has been found that during the COVID-19 pandemic, digitally-driven innovations swiftly became the ramparts of personal as well as professional life (Panigutti, Perotti, & Pedreschi, 2020). Linked digital devices enable both remote education and work. Moreover, chatbots are giving immediate life-saving insights, partly discharging overwhelmed health frameworks (Leite et al., 2020). The information systems for geolocation are facilitating health personnel and academicians to monitor and track the spread of the pandemic. Organizations and states are establishing and navigating swiftly, responsive processes to execute emergent technologies which include IoT, AI, blockchain-driven telemedicine, drones, autonomous vehicles, and climate innovation (Panigutti et al., 2020).

At the beginning of the pandemic, one researcher identified that people believe that not all service industries are going to be affected in the same way (Rapaccini et al., 2020). The interviewed managers in the service industry believed that more advanced services were going to be less impacted by the pandemic than more basic services. Previous crises also revealed that companies that were innovative and invested in developing new business models and advanced services were less impacted by crises (Kowalkowski & Ulaga, 2017). Rapaccini et al.'s (2020) study found that companies that were more oriented toward digitalization and innovation were less affected by the COVID 19 crisis. Therefore, we can conclude that their results correspond to our results.

This study is conducted at a time when the whole world is facing the same challenge, a few industries suffered a lot and few survived. The limitation of our study is that it is conducted only on hypermarkets in the GCC countries, and the findings

cannot be generalized to other industries with full confidence. Therefore, further research should analyze more industries from both the private and public sectors. Moreover, cross-cultural comparison can be conducted by including European countries, the USA, etc.

References

- Ågerfalk, P. J., Conboy, K., & Myers, M. D. (2021). Information systems in the age of pandemics: COVID-19 and beyond. *European Journal of Information Systems*, 29(3), 203-207. doi.org/10.1080/0960085X.2020.1771968
- Al-Youbi, A. O., Al-Hayani, A., Rizwan, A., & Choudhry, H. (2021). Implications of COVID-19 on the Labor Market of Saudi Arabia: The Role of Universities for a Sustainable Workforce. *Sustainability*, 12(17), 7090. doi.org/10.3390/su12177090
- Amankwah-Amoah, J. (2020). Stepping up and stepping out of COVID-19: New challenges for environmental sustainability policies in the global airline industry. *Journal of Cleaner Production*, 271, 123000. doi.org/10.1016/j.jclepro.2020.123000
- Arcangeli, G., Giorgi, G., Mucci, N., Bernaud, J.L. & di Fabio A. (2019). Emerging and Re-Emerging Organizational Features, Work Transitions and Occupational Risk Factors: The Good, the Bad, the Right: An Interdisciplinary Perspective. Front. Psychol., 8, 1534. doi.org/10.3389/fpsyg.2018.01533
- Arunachalam, P. S., Wimmers, F., Mok, C. K. P., Perera, R. A., Scott, M., Hagan, T., & Wagh, D. (2022). Systems biological assessment of immunity to mild versus severe COVID-19 infection in humans. *Science*, 369(6508), 1210. doi.10.1126/science.abc6261
- Baloch, Z., Ma, Z., Ji, Y., Ghanbari, M., Pan, Q., & Aljabr, W. (2020). Unique challenges to control the spread of COVID-19 in the Middle East. *Journal of Infection and Public Health*, 13(9), 1247-1250. doi.org/10.1016/j.jiph.2020.06.034
- Barreiro-Gen, M., Lozano, R., & Zafar, A. (2021). Changes in Sustainability Priorities in Organisations due to the COVID-19 Outbreak: Averting Environmental Rebound Effects on Society. Sustainability, 12(12), 5031. doi.org/10.3390/su12125031
- Barrero, J. M., Bloom, N., & Davis, S. J. (2022). Covid-19 is also a reallocation shock (No. w27137). National Bureau of Economic Research.
- Bartik, A. W., Bertrand, M., Cullen, Z. B., Glaeser, E. L., Luca, M., & Stanton, C. T. (2020). How are small businesses adjusting to covid-19? early evidence from a survey (No. w26989). National Bureau of Economic Research.
- Bartik, A. W., Bertrand, M., Cullen, Z., Glaeser, E. L., Luca, M., & Stanton, C. (2020). The impact of COVID-19 on small business outcomes and expectations, *Proceedings of the National Academy of Sciences*, 117(30), 17656-17666. doi.org/10.1073/pnas.2006991117
- Batista, A. A. D. S., & Francisco, A. C. D. (2019). Organizational sustainability practices: A study of the firms listed by the corporate sustainability index, *Sustainability*, *10*(1), 226. doi.org/10.3390/su10010226
- Bell, D. N., & Blanchflower, D. G. (2022). US and UK labor markets before and during the Covid-19 crash, National Institute Economic Review, 252, R52-R69. doi.org/10.1017/nie.2020.14
- Blokker, R., Akkermans, J., Tims, M., Jansen, P., & Khapova, S. (2019). Building a sustainable start: The role of career competencies, career success, and career shocks in young professionals' employability, *Journal of Vocational Behavior*, 112, 172-184. doi.org/10.1016/j.jvb.2019.02.013
- Bofinger, P., Dullien, S., Felbermayr, G., Fuest, C., Hüther, M., Südekum, J., & di Mauro, B. W. (2021). Economic implications of the COVID-19 crisis for Germany and economic policy measures. In R. Baldwin & B. Weder di Mauro (Eds.), *Mitigating the COVID Economic Crisis: Act Fast and Do Whatever*, (pp.167-179). London, England: CEPR Press
- Caligiuri, P., De Cieri, H., Minbaeva, D., Verbeke, A., & Zimmermann, A. (2020). International HRM insights for navigating the COVID-19 pandemic: Implications for future research and practice, *Journal of international business studies*, 51(5), 697-713. doi.org/10.1057/s41267-020-00335-9
- Carnevale, J. B., & Hatak, I. (2021). Employee adjustment and well-being in the era of COVID-19: Implications for human resource management. *Journal of Business Research*, *116*, 183-187. doi.org/10.1016/j.jbusres.2020.05.037
- Chesbrough, H. (2021). To recover faster from Covid-19, open up: Managerial implications from an open innovation perspective. *Industrial Marketing Management*, 88, 410-413. doi.org/10.1016/j.indmarman.2020.04.010
- Cohen, M. J. (2020). Does the COVID-19 outbreak mark the onset of a sustainable consumption transition?. *Sustainability: Science, Practice and Policy*, *16*(1), 1-3. doi.org/10.1080/15487733.2020.1740472
- De Vries, H., Tummers, L., & Bekkers, V. (2019). The diffusion and adoption of public sector innovations: A meta-synthesis of the literature. *Perspectives on Public Management and Governance*, 1(3), 159-176. doi.org/10.1093/ppmgov/gvy001
- DeLuca, J. S., Andorko, N. D., Chibani, D., Jay, S. Y., Rakhshan Rouhakhtar, P. J., Petti, E., & Akouri-Shan, L. (2020). Telepsychotherapy with youth at clinical high risk for psychosis: Clinical issues and best practices during the COVID-19 pandemic. *Journal of Psychotherapy Integration*, 30(2), 304. doi.org/10.1037/int0000211
- Dey, M., & Loewenstein, M. A. (2021). How many workers are employed in sectors directly affected by COVID-19 shutdowns, where do they work, and how much do they earn?, *Monthly Labor Review*, 1-19.
- Di Fabio, A., Rosen, M.A. (2019). Opening the black box of psychological processes in the science of sustainable development: A new frontier. *European Journal of Sustainable Development Resources*, 2, 1–5. doi.org/10.20897/ejosdr/3933
- Donthu, N., & Gustafsson, A. (2021). Effects of COVID-19 on business and research, *Journal of Business Research*, 117, 284. doi.org/10.1016/j.jbusres.2020.06.008

- Furrer, O., Yu Kerguignas, J., Delcourt, C. & Gremler, D.D. (2020), Twenty-seven years of service research: a literature review and research agenda. *Journal of Services Marketing*, 34(3), 299-316. doi.org/10.1108/JSM-02-2019-0078
- Ganatra, S., Hammond, S. P., & Nohria, A. (2021). The novel coronavirus disease (COVID-19) threat for patients with cardiovascular disease and cancer. *Cardio Oncology*, 2(2), 350-355.
- Giritli Nygren, K., & Olofsson, A. (2020). Managing the Covid-19 pandemic through individual responsibility: the consequences of a world risk society and enhanced ethopolitics. *Journal of Risk Research*, 23(7-8), 1031-1035. doi.org/10.1080/13669877.2020.1756382
- Gostin, L. O., & Wiley, L. F. (2021). Governmental public health powers during the COVID-19 pandemic: stay-at-home orders, business closures, and travel restrictions. *Jama*, 323(21), 2137-2138. doi:10.1001/jama.2020.5460
- Graves, L. M., & Karabayeva, A. (2020). Managing virtual workers—strategies for success. *IEEE Engineering Management Review*, 48(2), 166-172. 10.1109/EMR.2020.2990386
- Guerrieri, V., Lorenzoni, G., Straub, L., & Werning, I. (2020). Macroeconomic Implications of COVID-19: Can Negative Supply Shocks Cause Demand Shortages? (No. w26918). National Bureau of Economic Research.
- Haverback, H. R. (2021). Middle-Level Teachers Quarantine, Teach and Increase Self-Efficacy Beliefs: Using Theory to Build Practice during COVID-19, *Middle Grades Review*, 6(2), n2.
- He, H., & Harris, L. (2020). The impact of Covid-19 pandemic on corporate social responsibility and marketing philosophy, Journal of business research, 116, 176-182. doi.org/10.1016/j.jbusres.2020.05.030
- Heinonen, K. & Strandvik, T. (2021). Reframing service innovation: COVID-19 as a catalyst for imposed service innovation, Journal of Service Management, 32 (1), 101-112. doi.org/10.1108/JOSM-05-2020-0161
- Hite, L. M., & McDonald, K. S. (2022). Careers after COVID-19: challenges and changes. *Human Resource Development International*, 23(4), 427-437. doi.org/10.1080/13678868.2020.1779576
- Huang, W., Chen, S., & Nguyen, L. T. (2020). Corporate social responsibility and organizational resilience to COVID-19 crisis: An empirical study of Chinese firms. *Sustainability*, 12(21), 8970. doi.org/10.3390/su12218970
- Ivanov, D. (2020). Viable supply chain model: integrating agility, resilience and sustainability perspectives—lessons from and thinking beyond the COVID-19 pandemic. *Annals of Operations Research*, 1-21. doi.org/10.1007/s10479-020-03640-6
- Jiménez-Pavón, D., Carbonell-Baeza, A., & Lavie, C. J. (2021). Physical exercise as a therapy to fight against the mental and physical consequences of COVID-19 quarantine: Special focus in older people. *Progress in cardiovascular diseases*, 63(3), 386. doi: 10.1016/j.pcad.2020.03.009
- Kaushik, M., & Guleria, N. (2021). The Impact of Pandemic COVID-19 in Workplace. European Journal of Business and Management, 12(15), 1-10.
- Kowalkowski, C., & Ulaga, W. (2018). Service strategy in action: A practical guide for growing your B2B service and solution business. Service Strategy Press.
- Kuckertz, A., Brändle, L., Gaudig, A., Hinderer, S., Reyes, C. A. M., Prochotta, A., & Berger, E. S. (2022). Startups in times of crisis–A rapid response to the COVID-19 pandemic. *Journal of Business Venturing Insights*, e00169, doi.org/10.1016/j.jbvi.2020.e00169.
- Li, Q., Guan, X., Wu, P., Wang, X., Zhou, L., Tong, Y., ... & Xing, X. (2020). Early transmission dynamics in Wuhan, China, of novel coronavirus–infected pneumonia. New England Journal of Medicine. doi: 10.1056/NEJMoa2001316
- Lozano, R. (2018). Proposing a definition and a framework of organizational sustainability: A review of efforts and a survey of approaches to change. *Sustainability*, *10*(4), 1157. doi.org/10.3390/su10041157
- Lozano, R., & Garcia, I. (2020). Scrutinizing sustainability change and its institutionalization in organizations. *Frontiers in Sustainability*, 1,1. doi.org/10.3389/frsus.2020.00001
- Majumdar, A., Shaw, M., & Sinha, S. K. (2020). COVID-19 debunks the myth of socially sustainable supply chain: A case of the clothing industry in South Asian countries. *Sustainable Production and Consumption*, 24, 150-155. doi.org/10.1016/j.spc.2020.07.001
- Manuti, A., Giancaspro, M. L., Molino, M., Ingusci, E., Russo, V., Signore, F., & Cortese, C. G. (2020). "Everything Will Be Fine": A Study on the Relationship between Employees' Perception of Sustainable HRM Practices and Positive Organizational Behavior during COVID19. Sustainability, 12(23), 10216. doi.org/10.3390/su122310216
- Michie, S., & West, R. (2021). Behavioral, environmental, social, and systems interventions against covid-19. Bmj, 370. doi.org/10.1136/bmj.m2982
- Muñoz, P., Kimmitt, J., Kibler, E., & Farny, S. (2019). Living on the slopes: entrepreneurial preparedness in a context under continuous threat. *Entrepreneurship & Regional Development*, 31(5-6), 413-434. doi.org/10.1080/08985626.2018.1541591
- Nenonen, S., & Storbacka, K. (2022). Don't adapt, shape! Use the crisis to shape your minimum viable system–And the wider market. *Industrial Marketing Management*, 88, 265-271. doi.org/10.1016/j.indmarman.2020.05.022.
- Obrenovic, B., Du, J., Godinic, D., Tsoy, D., Khan, M. A. S., & Jakhongirov, I. (2020). Sustaining enterprise operations and productivity during the COVID-19 pandemic: "Enterprise Effectiveness and Sustainability Model". *Sustainability*, 12(15), 5981. doi.org/10.3390/su12155981
- Oldekop, J. A., Horner, R., Hulme, D., Adhikari, R., Agarwal, B., Alford, M., & Bebbington, A. J. (2020). COVID-19 and the case for global development. *World Development*, 134, 105044. doi.org/10.1016/j.worlddev.2020.105044

- Pan, S. L., & Zhang, S. (2021). From fighting COVID-19 pandemic to tackling sustainable development goals: An opportunity for responsible information systems research. *International Journal of Information Management*, 102196. doi.org/10.1016/j.ijinfomgt.2020.102196
- Pantano, E., Pizzi, G., Scarpi, D., & Dennis, C. (2020). Competing during a pandemic? Retailers' ups and downs during the COVID-19 outbreak. Journal of Business Research, 116, 209-213. doi.org/10.1016/j.jbusres.2020.05.036.
- Papadopoulos, T., Baltas, K. N., & Balta, M. E. (2020). The use of digital technologies by small and medium enterprises during COVID-19: Implications for theory and practice. *International Journal of Information Management*, 55, 102192. doi.org/10.1016/j.ijinfomgt.2020.102192
- Payne, A., Frow, P., Steinhoff, L., & Eggert, A. (2020). Toward a comprehensive framework of value proposition development: From strategy to implementation. Industrial Marketing Management, 87, 244-255. doi.org/10.1016/j.indmarman.2020.02.015
- Queiroz, M. M., Ivanov, D., Dolgui, A., & Wamba, S. F. (2020). Impacts of epidemic outbreaks on supply chains: mapping a research agenda amid the COVID-19 pandemic through a structured literature review. *Annals of Operations Research*, 1-38. doi.org/10.1007/s10479-020-03685-7
- Rai, S. S., Rai, S., & Singh, N. K. (2021). Organizational resilience and social-economic sustainability: COVID-19 perspective. *Environment, Development, and Sustainability*, 23(8), 12006-12023. doi.org/10.1007/s10668-020-01154-6
- Rapaccini, M.; Saccani, N.; Kowalkowski, C.; Paiola, M.; Adrodegari, F. (2021). Navigating disruptive crises through serviceled growth: The impact of COVID-19 on Italian manufacturing firms. *Industrial Marketing Management*, 88, 225–237. doi.org/10.1016/j.indmarman.2020.05.017
- Saleem, M. U. H. A. M. M. A. D. (2021). Challenges to pediatric surgical practices during COVID-19 and their solutions. Pak Paed J, 44(2), 193-9.
- Schuster, C., Weitzman, L., Sass Mikkelsen, K., Meyer-Sahling, J., Bersch, K., Fukuyama, F., & Kay, K. (2020). Responding to COVID-19 Through Surveys of Public Servants. *Public Administration Review*. 80(5), 792-796. doi.org/10.1111/puar.13246
- Seetharaman, P. (2021). Business models shifts: Impact of Covid-19. International Journal of Information Management, 54, 102173. doi.org/10.1016/j.ijinfomgt.2020.102173
- Smith, A. C., Thomas, E., Snoswell, C. L., Haydon, H., Mehrotra, A., Clemensen, J., & Caffery, L. J. (2021). Telehealth for global emergencies: Implications for coronavirus disease 2019 (COVID-19). *Journal of telemedicine and telecare*, 1357633X20916567. doi.org/10.1177/1357633X20916567
- Verma, S., & Gustafsson, A. (2021). Investigating the emerging COVID-19 research trends in the field of business and management: A bibliometric analysis approach. *Journal of Business Research*, 118, 253-261. doi.org/10.1016/j.jbusres.2020.06.057
- Vnoučková, L. (2021). Impact of COVID-19 on human resource management. Revista Latinoamericana de Investigación Social, 3(1), 18-21.
- Williams, T. A., Gruber, D. A., Sutcliffe, K. M., Shepherd, D. A., & Zhao, E. Y. (2018). Organizational response to adversity: Fusing crisis management and resilience research streams. *Academy of Management Annals*, 11(2), 733-769. doi.org/10.5465/annals.2015.0134
- Woodside, J. M. (2021, June). Assessing the Academic Quality Impact of the COVID-19 Pandemic. In EdMedia+ Innovate Learning (pp. 126-131). Association for the Advancement of Computing in Education (AACE).



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