Evolving Impact Of COVID-19 On Sdgs: Strategies' To Prioritize Health, Education, Economic Recovery, Climate Resilience

Dr. Mahantesh Kuri
Assistant Professor
P G. Dept. of Business Administration
Rani Channamma University, Belagavi, KARNATAKA

&

Mr. Vishal Chenraj Jain
Research Scholar
P G. Dept. of Business Administration
Rani Channamma University, Belagavi, KARNATAKA

Abstract: The COVID-19 pandemic, which emerged in late 2019, continues to reverberate globally in 2023. This work explores the multifaceted impact of the pandemic on Sustainable Development Goals (SDGs), emphasizing the evolving dynamics and challenges that have emerged as the world adapts to the ongoing crisis. The pandemic disrupted progress towards several SDGs, most notably in the areas of health, education, and economic inequality. Further, the COVID-19 pandemic wrought a profound impact on entrepreneurship and social change, catalyzing a surge in digital transformation, the rapid rise of innovative startups addressing pandemic- specific needs, a notable shift towards remote work and collaboration technologies, and a heightened focus on healthcare and biotechnology innovation. Entrepreneurs also leveraged this moment to champion social impact initiatives, with startups addressing issues like food insecurity, mental health, and community support. The pandemic further heightened environmental awareness and sustainability concerns, necessitated policy and regulatory adaptations, spurred interest in supply chain resilience, and triggered shifts in consumer behavior, propelling new business models. The imperative of mental health and well-being drove the growth of digital mental health services and wellness products. Collectively, COVID-19 reshaped the landscape of entrepreneurship and fostered a renewed emphasis on social change and adaptability. However, Lockdown strained SDG 3 (Health), education disparities setback SDG 4 (Education), economic inequalities hindered SDG 10 (Inequality), COVID-19 posed questions for SDG 13 (Climate), gender equality (SDG 5) faced new challenges, and international cooperation (SDG 17) strained. Yet, the pandemic fostered innovation and resilience in alignment with

SDG 9 (Innovation). Hence this work emphasizes the necessity for continuous research into the effects of COVID-19 on entrepreneurship, social change, and the need for policy initiatives to address the evolving impact on SDGs. As the world navigates with immediate health concerns and the pandemic's enduring consequences,it highlights the value of strategies that prioritize health, education, economic recovery, and climate resilience in shaping a more sustainable and equitable future, even a midst persisting challenges.

Keywords: Covid-19; Digital Transformation; Innovative Startups; Entrepreneurship; Social Changes; Sustainable Development goals (SDGs); Strategies;

1. Introduction

The COVID-19 pandemic, an unprecedented global health crisis, has reshaped the fabric of societies worldwide. Originating in late 2019, the novel corona virus quickly spread, challenging nations, communities, and individuals on an unparalleled scale. This introduction delves into the multifaceted impact of the pandemic, exploring its effects on public health, economies, education, and daily life. The dynamic interplay of efforts to contain the virus, the search for medical solutions, and the societal adaptations made to navigate this new normal as central theme [1]. As we navigate the complexities of this ongoing crisis, understanding the profound implications of the COVID-19 pandemic becomes crucial for comprehending its lasting influence on our interconnected global landscape [2].

The COVID-19 pandemic, caused by the SARS-CoV-2 virus, swiftly evolved into a global challenge that transcended borders and tested the resilience of healthcare systems worldwide[3]. Government implemented unprecedented measures, including lockdown and social distancing, to curb the virus's spread, leading to widespread disruptions in daily life [5]. The pandemic's impact extended beyond health, triggering economic downturns, job losses, and highlighting existing social inequalities [4]. The scientific community rallied to develop vaccines at an unprecedented pace, showcasing both the collaborative potential of global research efforts and the importance of innovation in crisis response [6]. Education underwent a digital revolution with the widespread adoption of remote learning, and the workforce saw a dramatic shift toward remote work, transforming traditional employment models [7]. As nations grappled with the dual challenge of curbing the virus and revitalizing economies, the pandemic underscored the inter-connectedness of our world and the imperative of international collaboration [8]. The enduring legacy of COVID-19 prompts reflection on the vulnerabilities it exposed and the opportunities for positive change and resilience in the face of future uncertainties [9].

The impact of COVID-19 on entrepreneurship and social change has been profound and transformative [10]. As the world grappled with the unprecedented challenges brought about by the pandemic, the realms of business innovation and societal transformation saw a significant shift [11]. This introduction explores the multifaceted ways in which COVID-19 has influenced entrepreneurship and social change, from the acceleration of digital transformation and the emergence of innovative solutions to the heightened

focus on healthcare, sustainability, and mental well-being [12]. It also delves into the challenges, such as economic disparities and disruptions in international cooperation, that have emerged in this complex landscape. This transformative journey highlights the resilience, adaptability, and potential for positive change in the face of adversity.

In the wake of the COVID-19 pandemic, innovative and adaptive strategies have emerged as crucial instruments for bolstering progress toward Sustainable Development Goals (SDGs) [13]. In this context, many researchers have designed and explored a spectrum of strategies to enhance and accelerate advancements in key areas affected by the pandemic's impact [14]. From revitalizing public health infrastructure and fostering inclusive education models to addressing economic inequalities and bolstering climate resilience, these strategies embody a collective effort to navigate the challenges posed by the pandemic while simultaneously fortifying the pursuit of sustainable development[15]. As societies re-calibrate in the post-COVID era, these forward-looking approaches stand as beacons, guiding the way toward a more resilient, equitable, and sustainable future [16].

Amid the disruptions wrought by the COVID-19 pandemic, a range of strategies has surfaced, presenting opportunities to catalyze progress across the spectrum of Sustainable Development Goals (SDGs). In the realm of public health (SDG 3), strategies encompass the strengthening of healthcare systems, increasing vaccine accessibility, and fostering global health cooperation[17]. Innovations in education delivery and technology have become instrumental in advancing SDG 4 (Quality Education), aiming to bridge educational gaps exacerbated by the pandemic [18]. Economic recovery strategies not only address job losses but also target inequalities, aligning with the principles of SDG 10 (Reduced Inequality) [19]. Climate-resilient practices and sustainable initiatives contribute to progress on SDG 13(Climate Action) [20]. Gender-responsive strategies acknowledge the disproportionate impact on women, supporting SDG 5 (Gender Equality) [21]. As the world grapples with the ongoing challenges, these strategies reflect a commitment to a more inclusive, sustainable, and resilient future, encapsulating the spirit of international cooperation embedded in SDG 17 (Partnerships for the Goals) [22]. In synthesizing these approaches, societies will not only adapting to the aftermath of the pandemic but actively shaping a trajectory toward a more sustainable global landscape. But no or few research work is currently focused on studying the effects of pandemic on entrepreneurship, social changes, and impacts on sustainable development goals. Hence the main objective of our work is to identify the strategies that helps in addressing the evolving impact of covid-19 on SDGs and effects of pandemic on entrepreneurship and societal changes of our country.

2. Impact of Covid-19 on entrepreneurship and social change

The COVID-19 pandemic has significantly shaped both entrepreneurship and social dynamics, presenting challenges, fostering innovation, and prompting a collective reevaluation of how businesses and societal structures operate. Many entrepreneurs faced challenges such as disrupted supply chains, reduced consumer demand, and financial uncertainties [23]. However, it also sparked innovation and adaptability as businesses pivoted to new models and technologies [24]. In terms of social change, the pandemic highlighted and exacerbated existing inequalities. Efforts towards social impact became crucial, with initiatives focusing on healthcare, education, and support for vulnerable communities gaining significance [25]. The crisis underscored the inter-connectedness of global issues and the need for collaborative, sustainable solutions in both entrepreneurship and social change.

2.1 Entrepreneurship and social change : Small enterprises faced financial strains due to lock-downs, reduced consumer spending, and disruptions in the supply chain. Many entrepreneurs adapted quickly, embracing digital platforms, e-commerce, and remote work [26]. New business models emerged, emphasizing resilience and flexibility. The pandemic accelerated the adoption of technology, with a surge in online services, e-commerce, and digital solutions. The pandemic highlighted disparities in healthcare access, with marginalized communities disproportionately affected. Efforts to address these disparities gained prominence [27]. Education underwent a significant transformation, with an increased focus on remote learning [28]. However, the digital divide widened, exacerbating educational inequalities.

Social initiatives and community support gained importance. Grassroots efforts to help vulnerable populations, including food distribution and healthcare outreach, became vital [29].

2.2 Collaboration and Sustainability:

The need for international cooperation became evident in addressing both health and economic challenges. Lock-downs temporarily reduced pollution, prompting discussions on sustainable practices. Entrepreneurs and social enterprises explored eco-friendly solutions [30]. The crisis emphasized the importance of building resilient systems, whether in business or social structures, to withstand unforeseen challenges. Even-though,the pandemic posed substantial challenges, it also fueled innovation, resilience, and a renewed focus on addressing societal issues. The intersection of entrepreneurship and social change became a critical space for building a more inclusive, adaptable, and sustainable future [31].

2.3. Unique characteristics of societal issues

a. Innovation:

Businesses rapidly embraced digital solutions due to pandemic, leading to the accelerated adoption of technologies such as online collaboration tools, e-commerce platforms, and remote work infrastructure.The pandemic prompted breakthroughs in healthcare innovation, from the development of vaccines at an unprecedented pace to the use of tele-medicine for remote patient care [32].

b. **Resilience:**

Entrepreneurs and businesses pivoted their models to adapt to the changing landscape, demonstrating resilience in the face of economic uncertainties [33].The disruptions highlighted vulnerabilities in global supply chains, leading to efforts to build more resilient and localized supply networks.

c. **Renewed Focus on Societal Issues:**

The pandemic underscored the importance of addressing healthcare disparities, leading to renewed efforts to improve accessibility and equity in healthcare systems. Heightened awareness of societal inequalities, coupled with global movements advocating for social justice, prompted discussions and actions aimed at fostering a more inclusive and equitable world.

d. **Collaborative Initiatives:**

Collaboration between governments, businesses, and nonprofit organizations became essential in addressing both the health crisis and its Socio-economic repercussions .Local communities played a crucial role in responding to challenges, with increased emphasis on community-driven initiatives to support vulnerable populations.

e. **Environmental Considerations:**

The pandemic highlighted the interconnection between human activity and the environment, leading to a growing emphasis on sustainable practices and a green recovery [34].The widespread adoption of remote work brought attention to reduced commuting, contributing to discussions on long-term environmental benefits.In essence, the repercussions of COVID-19 have spurred transformative changes, fostering innovation, resilience, and a renewed commitment to addressing societal challenges on multiple fronts. These trends are shaping the way businesses operate, societies function, and the world approaches global issues.

Fig 1: Characteristic of Societal Issues

2.4 Intersection of entrepreneurship and societal change

The intersection of entrepreneurship and social change forms a powerful catalyst for building a sustainable future. Entrepreneurs driving social change focus on innovative solutions that address environmental, economic, and societal challenges. This intersection involves, ventures that prioritize **social or environmental** impact alongside financial sustainability [35]. These enterprises aim to address pressing issues, such as poverty, education, or environmental degradation, through innovative business models. **Investors** increasingly support businesses with a dual purpose – financial returns and positive societal impact. This approach aligns financial resources with socially responsible goals, encouraging sustainable practices [36]. Entrepreneurs are developing products and services that not only meet market demands but also contribute to solving global challenges, by providing **innovative solutions** such as renewable energy solutions, sustainable agriculture practices, and eco-friendly technologies [37]. Established businesses are integrating social and environmental responsibility(**corporate social responsibility**) into their core strategies. This includes ethical sourcing, reducing carbon footprints, and engaging in community development projects [38]. Entrepreneurs, NGOs, governments, and corporations **collaborate** to create a **supportive ecosystem.** This collaborative approach fosters innovation, knowledge sharing, and the development of comprehensive solutions for sustainable development [39]. Entrepreneurial endeavors often include **educational components**, empowering communities with the skills and knowledge needed for sustainable practices, thereby fostering long-term positive change. Entrepreneurs are pioneering **circular economy models** that prioritize waste reduction, reuse, and recycling [40]. This shift aims to create a regenerative system that minimizes environmental impact. In conclusion, the intersection of entrepreneurship and social change is a dynamic space where innovative solutions emerge, aligning economic prosperity with positive societal and environmental outcomes. This collaboration is essential for forging a path towards a sustainable and inclusive future.

3.   Strategies' to prioritize health, education, economic recovery, climate resilience

Implementing a comprehensive strategy to prioritize health, education, economic recovery, and climatic resilience involves a multi-dimensional approach. First, fostering   preventive   healthcare   measures, including   widespread   vaccination

campaigns and accessible telemedicine services, is crucial for maintaining public health [41]. Simultaneously, initiatives for digital inclusion and innovative teaching methods ensure equitable access and quality in education [42]. Economic recovery is advanced through supporting small and medium-sized enterprises, implementing job reskilling programs, and reinforcing social safety nets [43]. Additionally, transitioning to renewable energy sources, promoting sustainable agriculture, and investing in climate-resilient infrastructure contribute to climatic resilience [44]. Cross-cutting strategies, such as data analytics and public-private partnerships, play a pivotal role in optimizing the efficiency and impact of these efforts, fostering a holistic approach toward building a sustainable and resilient future [45].

3.2 Key Strategies:

Governments and organizations can implement integrated policies that consider the interconnectedness of health, education, economic recovery, and climatic resilience. This holistic approach ensures that strategies in one area complement and reinforce efforts in others.
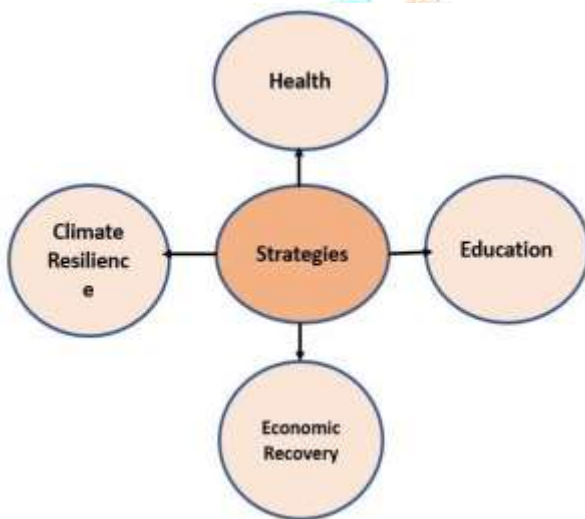

Fig 1: Key Strategies

3.2a. Health

Prioritizing health involves implementing a multifaceted strategy that encompasses preventive measures, robust healthcare infrastructure, and community empowerment [46]. Firstly, widespread vaccination campaigns and health education initiatives can mitigate the impact of infectious diseases. Investing in accessible and efficient healthcare systems, including medical facilities and skilled personnel, is fundamental for timely and quality healthcare delivery [47]. Promoting healthy behaviors through public awareness campaigns fosters a preventive approach. Integrating technology, such as telemedicine, enhances healthcare accessibility, especially in remote areas. Additionally, fostering international collaboration in research and resource-sharing contributes to a global health network. Overall, a holistic approach that combines preventive measures, infrastructure development, community engagement, and technological innovation is essential for effectively prioritizing health.

3.2b. Education

Prioritizing education involves a comprehensive strategy aimed at ensuring equitable access, quality, and adaptability [48]. To begin, bridging the digital divide is critical, achieved through initiatives providing devices and improving internet connectivity to ensure universal access to online learning. Continuous teacher training programs can enhance educators' ability to adapt to evolving educational paradigms, incorporating technology and innovative teaching methods. Developing flexible learning models that combine online and offline approaches accommodates diverse learning styles and situations [49]. Investment in inclusive and accessible education, especially for marginalized populations, is imperative for fostering equal opportunities. Additionally, fostering international collaboration in educational research and sharing best practices contributes to a global learning community [50]. Overall, a well-rounded strategy considers accessibility, adaptability, teacher capacity, and global cooperation to effectively prioritize education.

3.2 c. Economic recovery

Prioritizing economic recovery involves implementing targeted strategies to stimulate growth and resilience [51]. Supporting small and medium-sized enterprises (SMEs) through financial aid, grants, and streamlined access to credit fosters business continuity and job retention. Implementing reskilling and upskilling programs helps workers adapt to evolving industries, aligning skill sets with emerging market demands. Strengthening social safety nets ensures vulnerable populations have essential support during economic downturns, contributing to overall societal stability[52]. Diversifying the economy by investing in sectors with growth potential, particularly those aligned with sustainable practices, contributes to long-term resilience[53]. Collaboration between the public and private sectors, along with regulatory reforms, encourage innovation and entrepreneurship, fosters a conducive environment for economic recovery. Overall, a holistic approach combining targeted financial support, skill development, social safety nets, and a focus on sustainable industries is key to prioritizing economic recovery.

3.2d Climate Resilience

Prioritizing climate resilience involves a comprehensive strategy to mitigate the impacts of climate change and enhance adaptive capacities[54]. Transitioning to renewable energy sources and investing in green infrastructure can reduce carbon footprints and build climate-resilient systems [55]. Promoting sustainable and climate- resilient agricultural practices, such as crop diversification and water conservation, contributes to food security and ecosystem health [56]. Reforestation initiatives and ecosystem restoration projects help enhance natural climate resilience. Implementing climate-resilient urban planning and infrastructure, including early warning systems, protects communities from extreme weather events. International collaboration is crucial for sharing knowledge, technology, and resources to address global climate challenges collectively. Education and awareness programs on climate change foster a sense of responsibility and encourage sustainable practices at the community level. In essence, a holistic and collaborative approach is essential for prioritizing climate resilience and building a sustainable future. By employing these strategies in a coordinated manner, societies can work towards achieving a balanced and sustainable development that prioritizes health, education, economic recovery, and climatic resilience.

4. Conclusion

In conclusion, the impact of COVID-19 on entrepreneurship and social change has been transformative and multifaceted. While the pandemic brought unprecedented challenges to businesses, it also catalyzed innovation, adaptability, and a renewed focus on societal issues. Entrepreneurs demonstrated resilience by pivoting their strategies, embracing digital solutions, and fostering collaborations. Simultaneously, social change initiatives gained prominence, addressing healthcare inequalities, advocating for social justice, and emphasizing sustainability. The intersection of entrepreneurship and social change emerged as a powerful force, driving not only economic recovery but also laying the groundwork for more inclusive, adaptive, and socially conscious models. As we navigate the post-pandemic landscape, these lessons underscore the importance of collaborative, sustainable, and socially responsible approaches for a more resilient and equitable future.

Further, the integrated strategies to prioritize health, education, economic recovery, and climatic resilience represent a holistic blueprint for societal well-being and sustainable development. By combining preventive healthcare measures, inclusive educational practices, targeted economic support, and climate-conscious initiatives, societies can forge a path towards resilience and prosperity. The interplay of these strategies, supported by data-driven decision-making and collaborative partnerships, reflects a commitment to addressing the complex challenges of our time. This comprehensive approach not only enhances the immediate well-being of individuals and communities but also lays the foundation for a sustainable and adaptive future, where the health of the population, the strength of education systems, economic vitality, and environmental resilience are harmoniously interconnected.

References

1. Krammer, Sorin MS. "Navigating the New Normal: Which firms have adapted better to the COVID-19 disruption?." *Technovation* 110 (2022): 102368.

2. Amadei, Bernard. *Navigating the Complexity Across the Peace–Sustainability– Climate Security Nexus*. CRC Press, 2023.

3. Bisen, Amol Chhatrapati, Sristi Agrawal, Sachin Nashik Sanap, Heamanth Ganesan Ravi Kumar, Nelam Kumar, Rajdeep Gupta, and Rabi Sankar Bhatta. "COVID-19 retreats and world recovers: A silver lining in the dark cloud." *Health Care Science* 2, no. 4 (2023): 264-285.

4. Qureshi, Sajda. "Pandemics within the pandemic: Confronting Socio-economic inequities in a datafied world." *Information Technology for Development* 27, no. 2 (2021): 151-170.

5. Lee, Kwang-Sub, and Jin Ki Eom. "Systematic literature review on impacts of COVID-19 pandemic and corresponding measures on mobility." *Transportation* (2023): 1-55.

6. Robbins, Peter. "Innovating Innovation in Healthcare. How COVID Has Torn Up the Rule Book." In *One Health: Transformative Enterprises, Well-being and Education in the Knowledge Economy*, pp. 79-93. Emerald Publishing Limited, 2023.

7. Mangaraj, Sujata, and P. Narayan Reddy. "Rediscovering Management Education for the Pandemic World: The Road Map Ahead."

8. Solís, Mireya. *Japan's Quiet Leadership: Reshaping the Indo-Pacific*. Brookings Institution Press, 2023.

9. McClelland, Andrew G., Duncan Shaw, Nathaniel O'Grady, and Ayham Fattoum. "Recovery for Development: A Multi-Dimensional, Practice-Oriented Framework for Transformative Change Post-Disaster." *The Journal of Development Studies* 59, no. 1 (2023): 1-20.

10. Yáñez-Valdés, Claudia, Maribel Guerrero, Sebastián Barros-Celume, and María J. Ibáñez. "Winds

of change due to global lockdowns: Refreshing digital social entrepreneurship research paradigm." *Technological Forecasting and Social Change* 190 (2023): 122454.

11.   Gazilas, Emmanouil Taxiarchis. "Financial assessment of greece's top 10 energy enterprises amid the covid-19 pandemic." *Finance & Accounting Research Journal* 5, no. 9 (2023): 271-286.

12.   Su, Ruixin, Bojan Obrenovic, Jianguo Du, Danijela Godinic, and Akmal Khudaykulov. "COVID-19 pandemic implications for corporate sustainability and society: A literature review." *International Journal of Environmental Research and Public Health* 19, no. 3 (2022): 1592.

13.   Kaftan, Vitaly, Wadim Kandalov, Igor Molodtsov, Anna Sherstobitova, and Wadim Strielkowski. "Socio-economic Stability and Sustainable Development in the Post-COVID Era: Lessons for the Business and Economic Leaders." *Sustainability* 15, no. 4 (2023): 2876.

14.   Lester, Stan, and Mandy Crawford–Lee. "Learning from digital adaptations to the pandemic: enhancing work-based higher education." *Higher Education, Skills and Work-Based Learning* 13, no. 4 (2023): 786-799.

15.   Yeboah, Samuel, and Kwadwo Boateng Prempeh. "Greening the Future: Mobilizing Environmental Finance for Sustainable Development in Developing Countries." (2023).

16.   Visvizi, Anna, Krzysztof Kozłowski, and Raheel Nawaz, eds. *Higher Education Institutions and Covid-19: Toward Resilience and Sustainability Through Emergencies*. Taylor & Francis, 2023.

17.   World Health Organization. "Health systems resilience toolkit: A WHO global public health good to support building and strengthening of sustainable health systems resilience in countries with various contexts." (2022).

18.   Delgado Martín, Ana Victoria. "Digital Education Deployment in Developing Countries in the Context of a New Digital Economy Based Society." (2023).

19.   United Nations Office for Disaster Risk Reduction. *Global assessment report on disaster risk reduction 2022: Our world at risk: Transforming governance for a resilient future*. UN, 1901.

20.   Garcia, Manuela Gutierrez, and Saskia Werners WSG. "Climate resilient development framework and the creation of common agendas to tackle climate change." (2023).

21.   Leal Filho, Walter, Marina Kovaleva, Stella Tsani, Diana-Mihaela Țîrcă, Chris Shiel, Maria Alzira Pimenta Dinis, Melanie Nicolau et al. "Promoting gender equality across the sustainable development goals." *Environment, Development and Sustainability* (2022): 1-22.

22.   Barron, Patrick, Louise Cord, José Cuesta, Sabina Espinoza, and Michael Woolcock. *Social Sustainability in Development: Meeting the Challenges of the 21st Century*. World Bank Publications, 2023.

23.   Ajmal, Mian M., Mehmood Khan, Muhammad Kashif Shad, Haseena AlKatheeri, and Fauzia Jabeen. "Empirical examination of societal, financial and technology- related challenges amid COVID-19 in service supply chains: evidence from emerging market." *The International Journal of Logistics Management* 34, no. 4 (2023): 994-1019.

24.   Burnell, Devin, Regan Stevenson, and Greg Fisher. "Early-stage business model experimentation and pivoting." *Journal of Business Venturing* 38, no. 4 (2023): 106314.

25.   Beaunoyer, Elisabeth, Sophie Dupéré, and Matthieu J. Guitton. "COVID-19 and digital inequalities: Reciprocal impacts and mitigation strategies." *Computers in human behavior* 111 (2020): 106424.

26.   Modgil, Sachin, Yogesh K. Dwivedi, Nripendra P. Rana, Shivam Gupta, and Sachin Kamble. "Has Covid-19 accelerated opportunities for digital entrepreneurship? An Indian perspective." *Technological Forecasting and Social Change* 175 (2022): 121415.

27.   Brakefield, Whitney S., Olufunto A. Olusanya, Brianna White, and Arash Shaban- Nejad. "Social determinants and indicators of COVID-19 among marginalized communities: a scientific review and call to action for pandemic response and recovery." *Disaster Medicine and Public Health Preparedness* 17 (2023): e193.

28.   Bonfield, Christopher Alan, Marie Salter, Alan Longmuir, Matthew Benson, and Chie Adachi. "Transformation or evolution?: Education 4.0, teaching and learning in the digital age." *Higher education pedagogies* 5, no. 1 (2020): 223-246.

29.   Joseph, Jaison, Hari Sankar, Gloria Benny, and Devaki Nambiar. "Who are the vulnerable, and how do we reach them? Perspectives of health system actors and community leaders in Kerala, India." *BMC Public Health* 23, no. 1 (2023): 748.

30.   Mehendalec, Smita, and Lalitprakash Baraik. "Model framework characterizing long term sustainable and successful social enterprises." *Perspectives in Sustainable Management Practices* (2023): 19.

31. Hummels, Harry, and Aikaterini Argyrou. "Planetary demands: Redefining sustainable development and sustainable entrepreneurship." *Journal of Cleaner Production* 278 (2021): 123804.

32. Robbins, Peter. "Innovating Innovation in Healthcare. How COVID Has Torn Up the Rule Book." In *One Health: Transformative Enterprises, Wellbeing and Education in the Knowledge Economy*, pp. 79-93. Emerald Publishing Limited, 2023.

33. Cannice, Mark V., Sun-Young Park, and June Y. Lee. "A shock to the system: entrepreneurial ecosystem resilience and adaptation in a global pandemic." *Journal of Small Business and Enterprise Development* 30, no. 1 (2023): 30-57.

34. Zhang, Shikun, Muhammad Khalid Anser, Michael Yao-Ping Peng, and Chunchun Chen. "Visualizing the sustainable development goals and natural resource utilization for green economic recovery after COVID-19 pandemic." *Resources Policy* 80 (2023): 103182.

35. Ahmad, Zafran, Liu Chao, Wang Chao, Wasim Iqbal, Sulaman Muhammad, and Shujaat Ahmed. "Assessing the performance of sustainable entrepreneurship and environmental corporate social responsibility: revisited environmental nexus from business firms." *Environmental Science and Pollution Research* (2021): 1-14.

36. Tampakoudis, I., Kiosses, N. and Petridis, K., 2023. The impact of mutual funds' ESG scores on their financial performance during the COVID-19 pandemic. A data envelopment analysis. *Corporate Governance: The International Journal of Business in Society*.

37. Islam, Md Touhidul. "Newly developed green technology innovations in business: paving the way toward sustainability." *Technological Sustainability* (2023).

38. González-Ramos, M. Isabel, Mario J. Donate, and Fátima Guadamillas. "The interplay between corporate social responsibility and knowledge management strategies for innovation capability development in dynamic environments." *Journal of Knowledge Management* 27, no. 11 (2023): 59-81.

39. RINCON ADARME, MARIA PAULA. "Developing collaboration frameworks through a management approach: the case of NGOs and Social Entrepreneurs." (2022).

40. Toker, Kerem, and Ali Görener. "Evaluation of circular economy business models for SMEs using spherical fuzzy TOPSIS: an application from a developing countries' perspective." *Environment, development and sustainability* 25, no. 2 (2023): 1700-1741.

41. Martins, Flavio, Anna Lima, Loan Diep, Luciana Cezarino, Lara Liboni, Rita Tostes, and Priti Parikh. "COVID-19, SDGs and public health systems: Linkages in Brazil." *Health Policy OPEN* 4 (2023): 100090.

42. Manyasa, E. M. M. A. N. U. E. L. "Assessing the impact of ICT integration policy on the equitable access to quality education in African contexts: the case of Kenya." (2021).

43. Mawani, Farah N., Virginia Gunn, Patricia O'Campo, Michelle Anagnostou, Carles Muntaner, Susitha Wanigaratne, Melissa Perri, Carolyn Ziegler, and Angie An. "COVID-19 economic response and recovery: a rapid scoping review." *International Journal of Health Services* 51, no. 2 (2021): 247-260.

44. Wani, Suhas P. "New paradigm for transforming Indian agriculture to climate- resilient and sustainable agriculture is a must." *Journal of Agro-meteorology* 25, no. 1 (2023): 79-91.

45. Gómez-Carmona, Oihane, David Buján-Carballal, Diego Casado-Mansilla, Diego López-de-Ipiña, Juan Cano-Benito, Andrea Cimmino, María Poveda-Villalón et al. "Mind the gap: The AURORAL ecosystem for the digital transformation of smart communities and rural areas." *Technology in Society* 74 (2023): 102304.

46. Lal, Arush, Salma M. Abdalla, Vijay Kumar Chattu, Ngozi Adaeze Erondu, Tsung-Ling Lee, Sudhvir Singh, Hala Abou-Taleb, Jeanette Vega Morales, and Alexandra Phelan. "Pandemic preparedness and response: exploring the role of universal health coverage within the global health security architecture." *The Lancet Global Health* 10, no. 11 (2022): e1675-e1683.

47. World Health Organization. *Global patient safety action plan 2021-2030: towards eliminating avoidable harm in health care*. World Health Organization, 2021.

48. Chan, Cecilia Ka Yuk. "A comprehensive AI policy education framework for university teaching and learning." *International Journal of Educational Technology in Higher Education* 20, no. 1 (2023): 38.

49. Zhanbayev, Rinat A., Muhammad Irfan, Anna V. Shutaleva, Daniil G. Maksimov, Rimma Abdykadyrkyzy, and Şahin Filiz. "Demoethical Model of Sustainable Development of Society: A Roadmap towards Digital Transformation." *Sustainability* 15, no. 16 (2023): 12478.

50. Guerra, Paula, Ignacio Figueroa Céspedes, Pablo Zamora, and María Paz González. "An exploratory study of Chilean early childhood teachers' professional learning communities." *Early Years* (2023): 1-15.

51. Ranjbari, Meisam, Zahra Shams Esfandabadi, Simone Domenico Scagnelli, Peer- Olaf Siebers, and Francesco Quatraro. "Recovery agenda for sustainable development post COVID-19 at the country level:

developing a fuzzy action priority surface." *Environment, Development and Sustainability* 23 (2021): 16646-16673.

52. Silalahi, Masna Sopia, and Sandhy Walsh. "Analyzing Government Policies in Addressing Unemployment and Em-powering Workers: Implications for Economic Stability and Social Welfare." *Law and Economics* 17, no. 2 (2023): 99-117.

53. Abubakar, Emmanuel. "Impact of Foreign Direct Investment on Poverty Reduction and Economic Development." *Journal of Poverty, Investment and Development* 8, no. 2 (2023): 80-89.

54. Campbell-Lendrum, Diarmid, Tara Neville, Christian Schweizer, and Maria Neira. "Climate change and health: three grand challenges." *Nature Medicine* 29, no. 7 (2023): 1631-1638.

55. Glemarec, Yannick. "Financing green and climate resilient infrastructure in ASEAN countries." *Environmental Progress & Sustainable Energy* (2023): e14097.

56. Hossain, Akbar, Khondoker Abdul Mottaleb, Sagar Maitra, Biplab Mitra, Sharif Ahmed, Sukamal Sarker, Apurbo K. Chaki, and Alison M. Laing. "Conservation agriculture: Next-generation, climate resilient crop management practices for food security and environmental health." In *Conservation Agriculture: A Sustainable Approach for Soil Health and Food Security: Conservation Agriculture for Sustainable Agriculture*, pp. 585-609. Singapore: Springer Singapore, 2021.