

Guest editorial: Emerging issues in digital entrepreneurship – challenges and opportunities

1. Introduction

In the last decade, the use of digital and cutting-edge technology to promote entrepreneurial opportunities has grown, providing a strong platform for digitally enabled entrepreneurship (Nambisan, 2017; Dong, 2019; Upadhyay *et al.*, 2023). These technologies are advancing the progress of entrepreneurship by redefining and reshaping business and strategy (Cavallo *et al.*, 2019) and are key factors in enabling competitiveness (Al-Kassab *et al.*, 2014) and the ability of entrepreneurs to navigate turbulent and uncertain environments (Troise *et al.*, 2022). This Special Issue aims to explore how digital and emerging/cutting-edge technologies, such as artificial intelligence and high-performance computing, are influencing and up-scaling entrepreneurship. Our goals for this Special Issue on digital entrepreneurship are to (1) explore the theoretical and practical significance of digital and cutting-edge technology adoption; (2) consider emerging theories and models and (3) explore the implications of new technologies in the entrepreneurial process.

This call echoes emerging issues for example uncertainties of new digital technologies in entrepreneurial processes, challenges of implementation and opportunities (Nambisan, 2017; Dwivedi *et al.*, 2021; Upadhyay *et al.*, 2023). Specifically in a present-day digital context, one contributing success factor of any business is related to the adoption of digital and emerging/cutting-edge technologies such as digital business. Arguably, firms rely heavily on their own knowledge (know-how), resources (know-what) and capabilities (know-who), with the tendency to gain competitive edge and attaining high growth (Olan *et al.*, 2016). However, constant advancements in digital technologies (know-why) in such responsible AI trigger more issues for entrepreneurial processes. Therefore, the adoption of digital and emerging/cutting-edge technologies is one of the most significant strategies in progressing digital entrepreneurship, a process whereby firms such as small- and mid-size enterprises (SMEs) create new opportunities, innovative strategies and digital solutions (Kraus *et al.*, 2018; Sahut *et al.*, 2021; Modgil *et al.*, 2022). The new contribution of this Special Issue is to address the knowledge gaps of limited research on current and emerging issues, challenges and opportunities of digital and cutting-edge technologies to firms such as SMEs in digital entrepreneurship.

Digital and emerging/cutting-edge technologies have become essentially important in digital entrepreneurship with dynamic technologies and platforms, driven by the emergence of digital solutions, such as additive manufacturing, blockchain, robotics, cloud computing and big data analytics (Olan *et al.*, 2021). New digital and cutting-edge technologies provide new contexts, challenges and opportunities, making existing innovation obsolete thereby leading to uncertainty and possibly leading to firms upgrading existing technology, which further increases firms' cost (Zhao *et al.*, 2022; Bandara *et al.*, 2023; Onjewu *et al.*, 2023). The rapid upgrade to new technologies means that the entrepreneurial processes, structure and operations of existing working technology in the organisation require alignment and update. As technology adoption occurs over the different stages of entrepreneurship (Cunningham *et al.*, 2023; Olan *et al.*, 2023), digital and emerging/cutting-edge technologies need to consist of multi-layered solutions providing centralised technological supports for firms and decision-making processes (Olan *et al.*, 2023). Consequently, firms are strategically implementing

digital entrepreneurship solutions on a global scale, thus making firms to invest in technological infrastructures (Steininger, 2019). However, emerging issues in the adoption of digital and emerging/cutting-edge technologies include business complexity and interconnections, increasing the requirement for employee's skill sets, adaptable business processes and procedures.

This Special Issue will contribute to the exploration of new knowledge on the implementation of digital and emerging/cutting-edge technologies and digital entrepreneurship, gradually changing from the traditional to digital entrepreneurial processes and adding to existing literature that categorises digital technologies and entrepreneurship. Also, the Special Issue will focus on the managerial implication of digital and emerging/cutting-edge technologies-driven entrepreneurial engagements on emerging issues, challenges and opportunities.

2. The papers in this special issue

This Special Issue showcases the work of researchers and practitioners who are exploring the intersection of digital entrepreneurship and the issues faced by entrepreneurs in the digital environment. Our primary objective was to enhance scholarly knowledge and comprehension of the latest and most innovative technology in the field of entrepreneurship. We extended an invitation to the scholarly community through our call for papers, urging them to explore a range of subjects and engage in discussions regarding the increasing problems and opportunities in the field of digital entrepreneurship. After a thorough and demanding evaluation, we have picked 10 publications that pertain to the expansive field of emerging/cutting-edge technologies in entrepreneurship, specifically in the context of digital issues. Among the numerous articles we got, we decided to choose the ones that best aligned with exceptional arguments on contemporary topics related to digital entrepreneurship. These selected articles not only provide fresh theoretical viewpoints but also contribute to our knowledge in this specific field. We also aimed to incorporate papers that utilise diverse techniques for addressing the emerging issues in digital entrepreneurship: challenges and opportunities. The papers featured in this special edition encompass the following:

One of the thematic clusters in the selection of papers focuses on concerns regarding data management in times of disasters. The study conducted by [Costa *et al.* \(2024\)](#) expands upon how SMEs play a crucial role in the socioeconomic progress of a country or region. They immediately contribute to the growth of employment opportunities and the enhancement of income distribution. Although SMEs have significant relevance, there are still untapped prospects for creating initiatives that assist and direct SMEs in adopting digital technology, particularly for the purpose of digitising their customer service. The study conducted by [Neff *et al.* \(2024\)](#) specifically examines the lack of research in the economic utilisation of data spaces in the wholesale sector. The wholesale industry is facing new competition in their primary business due to the increasing accessibility of digital technologies in innovative services. The work by [Sitaridis and Kitsios \(2024\)](#) in the continuous developments in digital technologies and business models also addresses the subject of confirmation bias. The advent of digitisation has significantly transformed the entrepreneurial landscape, leading to a redefinition of the objectives and prerequisites of entrepreneurial education to align with the emerging digital environment in entrepreneurship. [Jami Pour *et al.* \(2024\)](#) present a conceptual framework centred around the Internet of Things (IoT), a new digital technology that has found extensive use in different industries. Among these industries, the transportation sector stands out as one of the most impacted by this technology. The integration of IoT into the transportation industry will result in significant transformations

and create numerous entrepreneurial prospects for individuals to establish innovative enterprises. The study conducted by [Appleton and Holt \(2024\)](#) examines the realm of social media and its analysis. It highlights digitalisation as a novel process that has the potential to enhance the worth of companies. According to current theoretical understanding, it is expected that a firm should incorporate into its strategy the ability to address various challenges in the business environment. This article examines the presence of digitalisation in a unique setting, specifically the English agriculture industry in the United Kingdom, which is predominantly composed of family-owned businesses. According to [Evertsen and Rasmussen \(2024\)](#), effective resource management is essential for enterprises to attain a competitive edge and achieve success, especially for startups with constrained resources. Understanding how digital startups, especially digital academic spin-offs (ASOs), strategically utilise their resources to maximise value is crucial.

The studies by [Alhajri and Aloud \(2024\)](#) and [Gil-Cordero et al. \(2024\)](#) emphasise the importance of innovation and digital technologies in addressing societal concerns while maintaining economic viability. [Bowen and Morris \(2024\)](#) suggest doing an analysis of the determinants influencing the inclination of SMEs to embrace the Metaverse. The final study in this group is authored by [Nakpodia et al. \(2024\)](#), and it highlights the lack of documentation about the utilisation of digital technologies by social entrepreneurs in underdeveloped nations to tackle communal issues during the COVID-19 pandemic. This study investigates the utilisation of digital technologies by social entrepreneurs, the many organisational factors at different levels and the resulting innovative outcomes achieved through the use of digital technologies.

3. Conclusion

The potential opportunities of digital and emerging/cutting-edge technologies outweigh the challenges. However, some of the opportunities may also lead to decisions that shift firms' strategic competition from traditional rivalry to a technology-driven rivalry, providing firms with a new opportunity in investing in sustainable competitive. Nevertheless, new emerging innovations such as AI and HPC are either opportunities or threats to firms, and the steps of implementing new digital and cutting-edge technologies with entrepreneurial processes include changing how labour works and moving some parts of the business processes from traditional to digitalised processes, at the same time considering their organisational structure, practices and policies. For instance, the impact of COVID-19 has changed the way firms operate, making the need to cultivate and capitalise on digital knowledge, skills and capabilities to make sense of and compete in the new digital landscape. Furthermore, firms are now able to fully exploit the benefits of implementing AI technologies in strategies and decision-making.

Femi Olan

Essex Business School, University of Essex, Southend-on-Sea, UK

Ciro Troise

University of Turin, Turin, Italy

Nadja Damij

Sunderland Business School, University of Sunderland, Sunderland, UK, and

Robert Newbery

Newcastle Business School, Northumbria University, Newcastle upon Tyne, UK

References

- Al-Kassab, J., Ouertani, Z.M., Schiuma, G. and Neely, A. (2014), "Information visualization to support management decisions", *International Journal of Information Technology and Decision Making*, Vol. 13 No. 2, pp. 407-428, doi: [10.1142/s0219622014500497](https://doi.org/10.1142/s0219622014500497).
- Alhajri, A. and Aloud, M. (2024), "Female digital entrepreneurship: a structured literature review", *International Journal of Entrepreneurial Behavior and Research*, Vol. 30 No. 2-3, pp. 369-397, doi: [10.1108/ijebr-09-2022-0790](https://doi.org/10.1108/ijebr-09-2022-0790).
- Appleton, S.W. and Holt, D. (2024), "Aligning strategy and digitalisation activity as an incremental or radical innovation in family farms", *International Journal of Entrepreneurial Behavior and Research*, Vol. 30 No. 2-3, pp. 498-519, doi: [10.1108/ijebr-10-2022-0938](https://doi.org/10.1108/ijebr-10-2022-0938).
- Bandara, F., Jayawickrama, U., Subasinghage, M., Olan, F., Alamoudi, H. and Alharthi, M. (2023), "Enhancing ERP responsiveness through big data technologies: an empirical investigation", *Information Systems Frontiers*, Vol. 26 No. 1, pp. 251-275, doi: [10.1007/s10796-023-10374-w](https://doi.org/10.1007/s10796-023-10374-w).
- Bowen, R. and Morris, W. (2024), "Digital entrepreneurship in agrifood business: a resource bricolage perspective", *International Journal of Entrepreneurial Behavior and Research*, Vol. 30 No. 2-3, pp. 482-497, doi: [10.1108/ijebr-02-2023-0226](https://doi.org/10.1108/ijebr-02-2023-0226).
- Cavallo, A., Ghezzi, A., Dell'Era, C. and Pellizzoni, E. (2019), "Fostering digital entrepreneurship from startup to scaleup: the role of venture capital funds and angel groups", *Technological Forecasting and Social Change*, Vol. 145, pp. 24-35, doi: [10.1016/j.techfore.2019.04.022](https://doi.org/10.1016/j.techfore.2019.04.022).
- Costa, A.C.F., Capelo Neto, F., Espuny, M., Rocha, A.B.T. and Oliveira, O.J. (2024), "Digitalization of customer service in small and medium-sized enterprises: drivers for the development and improvement", *International Journal of Entrepreneurial Behavior and Research*, Vol. 30 No. 2-3, pp. 305-341, doi: [10.1108/ijebr-10-2022-0953](https://doi.org/10.1108/ijebr-10-2022-0953).
- Cunningham, J.A., Damij, N., Modic, D. and Olan, F. (2023), "MSME technology adoption, entrepreneurial mindset and value creation: a configurational approach", *The Journal of Technology Transfer*, Vol. 48 No. 5, pp. 1574-1598, doi: [10.1007/s10961-023-10022-0](https://doi.org/10.1007/s10961-023-10022-0).
- Dong, J.Q. (2019), "Moving a mountain with a teaspoon: toward a theory of digital entrepreneurship in the regulatory environment", *Technological Forecasting and Social Change*, Vol. 146, pp. 923-930, doi: [10.1016/j.techfore.2018.07.050](https://doi.org/10.1016/j.techfore.2018.07.050).
- Dwivedi, Y.K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., Duan, Y., Dwivedi, R., Edwards, J., Eirug, A., Galanos, V., Ilavarasan, P.V., Janssen, M., Jones, P., Kar, A.K., Kizgin, H., Kronemann, B., Lal, B., Lucini, B., Medaglia, R., Le Meunier-FitzHugh, K., Le Meunier-FitzHugh, L.C., Misra, S., Mogaji, E., Sharma, S.K., Singh, J.B., Raghavan, V., Raman, R., Rana, N.P., Samothrakakis, S., Spencer, J., Tamilmani, K., Tubadji, A., Walton, P. and Williams, M.D. (2021), "Artificial Intelligence (AI): multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy", *International Journal of Information Management*, Vol. 57, 101994, doi: [10.1016/j.ijinfomgt.2019.08.002](https://doi.org/10.1016/j.ijinfomgt.2019.08.002).
- Evertsen, P.H. and Rasmussen, E. (2024), "Resource configurations among digital academic spin-offs: finding the technology-market fit", *International Journal of Entrepreneurial Behavior and Research*, Vol. 30 No. 2-3, pp. 305-341, doi: [10.1108/ijebr-10-2022-0937](https://doi.org/10.1108/ijebr-10-2022-0937).
- Gil-Cordero, E., Maldonado-López, B., Ledesma-Chaves, P. and García-Guzmán, A. (2024), "Do small- and medium-sized companies intend to use the Metaverse as part of their strategy? A behavioral intention analysis", *International Journal of Entrepreneurial Behavior and Research*, Vol. 30 No. 2-3, pp. 421-449, doi: [10.1108/ijebr-09-2022-0816](https://doi.org/10.1108/ijebr-09-2022-0816).
- Jami Pour, M., Hosseinzadeh, M. and Moradi, M. (2024), "IoT-based entrepreneurial opportunities in smart transportation: a multidimensional framework", *International Journal of Entrepreneurial Behavior and Research*, Vol. 30 No. 2-3, pp. 450-481, doi: [10.1108/ijebr-06-2022-0574](https://doi.org/10.1108/ijebr-06-2022-0574).
- Kraus, S., Palmer, C., Kailer, N., Kallinger, F.L. and Spitzer, J. (2018), "Digital entrepreneurship: a research agenda on new business models for the twenty-first century", *International Journal of Entrepreneurial Behavior and Research*, Vol. ahead-of-print No. ahead-of-print, doi: [10.1108/ijebr-06-2018-0425](https://doi.org/10.1108/ijebr-06-2018-0425).

- Modgil, S., Dwivedi, Y.K., Rana, N.P., Gupta, S. and Kamble, S. (2022), "Has Covid-19 accelerated opportunities for digital entrepreneurship? An Indian perspective", *Technological Forecasting and Social Change*, Vol. 175, p. 175, doi: [10.1016/j.techfore.2021.121415](https://doi.org/10.1016/j.techfore.2021.121415).
- Nakpodia, F., Ashiru, F., You, J.J. and Oni, O. (2024), "Digital technologies, social entrepreneurship and resilience during crisis in developing countries: evidence from Nigeria", *International Journal of Entrepreneurial Behavior and Research*, Vol. 30 No. 2-3, pp. 342-368, doi: [10.1108/ijebr-01-2023-0012](https://doi.org/10.1108/ijebr-01-2023-0012).
- Nambisan, S. (2017), "Digital entrepreneurship: toward a digital technology perspective of entrepreneurship", *Entrepreneurship Theory and Practice*, Vol. 41 No. 6, pp. 1029-1055, doi: [10.1111/etap.12254](https://doi.org/10.1111/etap.12254).
- Neff, A., Weber, P. and Werth, D. (2024), "Digital entrepreneurship in wholesale: identification of implementation strategies for data spaces", *International Journal of Entrepreneurial Behavior and Research*, Vol. 30 No. 2-3, pp. 258-276, doi: [10.1108/ijebr-10-2022-0943](https://doi.org/10.1108/ijebr-10-2022-0943).
- Olan, F., Liu, S., Neaga, I. and Alkhuraiji, A. (2016), "How knowledge sharing and business process contribute to organizational performance: using the fsQCA approach", *Journal of Business Research*, Vol. 69 No. 11, pp. 5222-5227, doi: [10.1016/j.jbusres.2016.04.116](https://doi.org/10.1016/j.jbusres.2016.04.116).
- Olan, F., Liu, S., Suklan, J., Jayawickrama, U. and Arakpogun, E.O. (2021), "The role of Artificial Intelligence networks in sustainable supply chain finance for food and drink industry", *International Journal of Production Research*, Vol. 60 No. 14, pp. 1-16, doi: [10.1080/00207543.2021.1915510](https://doi.org/10.1080/00207543.2021.1915510).
- Olan, F., Nyuur, R.B. and Arakpogun, E.O. (2023), "AI: a knowledge sharing tool for improving employees' performance", *Journal of Decision Systems*, pp. 1-21, doi: [10.1080/12460125.2023.2263687](https://doi.org/10.1080/12460125.2023.2263687).
- Onjewu, A.-K.E., Olan, F., Nyuur, R.B., Paul, S. and Nguyen, H.T.T. (2023), "The effect of government support on Bureaucracy, COVID-19 resilience and export intensity: evidence from North Africa", *Journal of Business Research*, Vol. 156, 113468, doi: [10.1016/j.jbusres.2022.113468](https://doi.org/10.1016/j.jbusres.2022.113468).
- Sahut, J.-M., Iandoli, L. and Teulon, F. (2021), "The age of digital entrepreneurship", *Small Business Economics*, Vol. 56 No. 3, pp. 1159-1169, doi: [10.1007/s11187-019-00260-8](https://doi.org/10.1007/s11187-019-00260-8).
- Sitaridis, I. and Kitsios, F. (2024), "Digital entrepreneurship and entrepreneurship education: a review of the literature", *International Journal of Entrepreneurial Behavior and Research*, Vol. 30 No. 2-3, pp. 277-304, doi: [10.1108/ijebr-01-2023-0053](https://doi.org/10.1108/ijebr-01-2023-0053).
- Steininger, D.M. (2019), "Linking information systems and entrepreneurship: a review and agenda for IT-associated and digital entrepreneurship research", *Information Systems Journal*, Vol. 29 No. 2, pp. 363-407, doi: [10.1111/ijisj.12206](https://doi.org/10.1111/ijisj.12206).
- Troise, C., Corvello, V., Ghobadian, A. and O'Regan, N. (2022), "How can SMEs successfully navigate VUCA environment: the role of agility in the digital transformation era", *Technological Forecasting and Social Change*, Vol. 174, p. 174, doi: [10.1016/j.techfore.2021.121227](https://doi.org/10.1016/j.techfore.2021.121227).
- Upadhyay, N., Upadhyay, S., Al-Debei, M.M., Baabdullah, A.M. and Dwivedi, Y.K. (2023), "The influence of digital entrepreneurship and entrepreneurial orientation on intention of family businesses to adopt artificial intelligence: examining the mediating role of business innovativeness", *International Journal of Entrepreneurial Behavior and Research*, Vol. 29 No. 1, pp. 80-115, doi: [10.1108/ijebr-02-2022-0154](https://doi.org/10.1108/ijebr-02-2022-0154).
- Zhao, G., Olan, F., Liu, S., Hormazabal, J.H., Lopez, C., Zubairu, N., Zhang, J., Chen, X., He, H., Lu, J. and Zhang, L. (2022), "Links between risk source identification and resilience capability building in agri-food supply chains: a comprehensive analysis", *IEEE Transactions on Engineering Management*, Vol. 13, pp. 1-18, doi: [10.1109/tem.2022.3221361](https://doi.org/10.1109/tem.2022.3221361).