Thematic track

1. Collaboration and open innovation in the digitalized context: challenges and opportunities

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The increased digitalization of business environment and organizational practices, together with digital literacy of the individuals, favor technology mediated interactions for innovation processes. Advancements in digital technologies ease interactions between different collaborating entities, allowing to leverage on knowledge diversity and crowd wisdom distributed among different partners and organizational actors, within and across organizational boundaries. This setting represents unprecedented opportunities, but poses also some challenges.

On one hand, digitalization opens up new questions for established knowledge in the Open Innovation (OI) field. In fact, it has been already highlighted that OI aids innovative outcomes, as by leveraging knowledge diversity and crowd wisdom distributed among the partners it is possible to favor the conception of valuable ideas and the development of successful innovations (Dahlander et al., 2021). However, studies on OI have so far overlooked the drawbacks that may come from digitalization for organizations (Cappa et al., 2019). Examples are intellectual property issues, as the collaborating partners may encounter difficulties in managing the property rights deriving from the digital collaboration, resources needed for the management of knowledge inflows and outflows, privacy issues for the information exchange of the individuals and partners involved, and security issues related to the risk of data breach due to the digital interaction which occur between partners. There is the need to further analyze the opportunities as well the drawbacks brought about OI in the digital environment, and to generate further insights on knowledge transfer and integration of hybrid interactions.

On the other hand, digitalization poses new questions also for the study of the so called human side of innovation (Brenton and Levin, 2012), which refers to the role of people, individually or in a group, in conceiving and developing innovation at all the stages of the innovation process (Perry-Smith and Mannucci, 2017; Verganti, 2017; Zasa et al., 2022). The Covid-19 pandemic forced people to experience collaborative interactions and nurture relationships in a digital environment, where face-to- face interactions are not granted anymore, challenging established values, norms, activities and skills of single individuals. The implications of digitalization on such collaborative dynamics and plural interactions are still little explored. So far, literature extensively studies digital interactions and collaboration mainly from a functional perspective, looking at the tools and methods to manage the geographical distance between people (Cortellazzo et al., 2019), or focusing on the capabilities and traits for effective leaders and virtual teams (Iannotta et al., 2020). However, there is a gap in identifying the behavioral practices underlying effective collaboration for innovation and creativity in a digital or hybrid context.

The proposed Special Track responds to the above mentioned challenges and aims at nurturing studies on collaboration and open innovation in a digital environment. To respond to this call, conceptual and empirical investigations, both qualitative and quantitative, are needed. Among others, this call welcomes studies that include the following aspects:

Open Innovation and digitalization:

- How may digitalization of the business environment favor OI?
- How can organizations leverage information technology and digital literacy for OI?
- Can crowd phenomena (i.e., crowdsourcing, crowdfunding, and citizen science) be,better leveraged for OI aims?
- Are OI intellectual property issues exacerbated in the digital environment?
- How to foster OI inter-organizational collaboration networks (e.g., hybrid partnership, diffused collaborative innovation networks)?

Collaborative practices for innovation and digitalization:

- How can companies and managers organize and lead people to facilitate collaboration to generate, develop, and manage innovation in contexts that are both digital and physical?

- How can managers lead teams that involve both in presence and virtual members? (e.g., organizations that have both in-site and smart-working actors; organizations that leverage the online labor markets)
- How to ensure the effectiveness of such collaboration within and across organizational boundaries?
- Which behaviors and practices can be encouraged and promoted to foster creativity and innovation in a digital environment?

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Cappa, F., Oriani, R., Pinelli, M., De Massis, A., 2019. When does crowdsourcing benefit firm stock market performance? Research Policy 48. doi:10.1016/j.respol.2019.103825

Cortellazzo, L., Bruni, E., Zampieri, R., 2019. The role of leadership in a digitalized world: A review. Frontiers in psychology 10

Dahlander, L., Gann, D.M., Wallin, M.W., 2021. How open is innovation? A retrospective and ideas forward. Research Policy 50. doi:10.1016/j.respol.2021.104218

Iannotta, M., Meret, C., Marchetti, G., 2020. Defining leadership in smart working contexts: a concept synthesis. Frontiers in psychology 11.

Perry-Smith, J.E., Mannucci, P. V, 2017. From creativity to innovation: The social network drivers of the four phases of the idea journey. Academy of Management Review 42, 53–79.

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Zasa, F.P., Verganti, R., Bellis, P., 2022. Innovator or collaborator? A cognitive network perspective to vision formation. European Journal of Innovation Management in press.

2. Digital and green transition in entrepreneurial finance

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Recent transformation in digital technologies has dramatically transformed how firms mobilize resources, among which financial capital, from their environments and interact with prospective investors (Cumming et al., 2021). In the last decade, new players and methods to finance startups and small and medium-sized firms (SMEs) have emerged, disruptively changing the entrepreneurial finance ecosystem. Crowdfunding has spawned new networks of (unsophisticated) investors, but the impact of their human and social capital in attaining business success and improving firms' performance is yet unclear.

The current COVID-19 pandemic has further fostered digitalization across the globe (Sheng et al., 2021), making digitalization even more important for financial providers and raising challenges for regulatory authorities. Following the pandemic and the Ukrainian conflict, another critical issue is the transition to a greener economy. To make this happen, we need to create new ways to evaluate and monitor "green" startups (e.g., renewable sector, circular economy, mobility, energy efficiency/storage, etc..), facilitate their funding and, thus, contribute to the transition to a more sustainable economy (Köhler et al., 2019). In addition, we need to better understand the performance of ESG/climate-related investments as well as their influence on financed firms.

All these trends pose new and relevant challenges for research. However, to date, we lack a deep theoretical and empirical understanding of how digitalization and green transition affect the investment process and networks of new and traditional financial actors, as well as the impact on firms' performances. The aim of this tack is to collect and discuss original papers on these themes.

We are particularly interested in submissions that address, but are not limited to, the following research questions:

- How is digitization transforming startups' and SMEs' financing and growth patterns?
- How can digitalization help firms to stand out from the crowd? What kind of new interactions with potential investors affect firms' acquisition of financial resources?
- What role does the network of investors play in crowdfunding in influencing firms' performance and subsequent professional financing?
- How does crowdfunding influence the governance practices of firms and the raising of follow-on financial rounds?
- What is the role of digital currencies, ICOs, "tokenized" startups?
- How do traditional players and new investors interact? How is digitalization influencing VCs' and BAs' investment process?
- What is the performance of "green" startups that collect capital through alternative financial channels, such as crowdfunding? What is their typical funding pattern?
- What environmental, social, and governance (ESG) factors do investors take into account? What is the performance of ESG investments compared to non-ESG ones?
- What are the challenges in measuring startups' ESG performance?
- What are the challenges faced by policy makers related to the digital and green transition in the entrepreneurial finance ecosystem?

Cumming D.J., T. Vanacker, & S.A. Zahra (2021), Equity crowdfunding and governance: toward an integrative model and research agenda. Academy of Management Perspective, Vol. 35, No. 1, pp. 69-95.

Köhler, J., Geels, F. W., Kern, F., Markard, J., Onsongo, E., Wieczorek, A., ... & Wells, P. (2019). An agenda for sustainability transitions research: State of the art and future directions. Environmental innovation and societal transitions, 31, 1-32.

Sheng, J., J. Amankwah-Amoah, Z. Khan and X. Wang (2021). 'COVID-19 pandemic in the new era of big data analytics: Methodological innovations and future research directions', British Journal of Management, 32(4), pp. 1164-1183.

3. Innovation and digital transition in supply chains to foster circular economy

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The circular economy approach aims to reduce resource use, prevent waste and optimise the environmental, social and economic value of products, components and materials through initiatives such as reuse, repair, refurbishment and, ultimately, recycling (Centobelli et al., 2021; Mignacca et al., 2020; Mignacca & Locatelli, 2021; Velenturf et al., 2019; Velenturf & Purnell, 2021).
Surprisingly, progress in implementing circular economy initiatives has been slow so far, with the global economy becoming less rather than more "circular" (Circle Economy, 2021). The transition from a linear economy to a circular economy requires substantial innovation efforts. Multiple strategic initiatives could be implemented to make these innovation efforts more effective. Inter-organisational collaboration (e.g., open innovation and buyer-supplier relationship initiatives) proved to be very effective in enhancing innovation performance (Aalbers & Whelan, 2021; Ollila & Yström, 2016).
The positive effect of inter-organisational collaboration on circular economy could be moderated by the creation of an open environment to favour creativity (Gallagher et al., 2018), by further harnessing the potential contribution of non-governmental organisations and universities in the innovation system (Wolf et al., 2021), or by the proper adoption of Industry 4.0 technologies (de Sousa Jabbour et al., 2018).
Furthermore, digital technologies are changing how products are designed, created, and delivered to customers, with relevant implications that extend from single companies to the inter-organisational and overall supply chain level (Fatorachian and Kazemi, 2021).
Previous contributions investigate conceptualisations of the phenomenon (Culot et al., 2020), the development of implementation roadmaps (Ghobakhloo, 2018), and pilot projects in several companies, especially in the manufacturing sector (Zangiacomi et al., 2019). It is now the time for large-scale implementations and assessment of the potential contribution of digital technologies and the factors that might maximise their benefits – e.g. open innovation.
Previous studies show that Industry 4.0 and its underpinning technologies can have both positive and negative impacts on a wide set of environmental sustainability performances, such as material consumption, energy consumption, waste production, emissions, and recycling (Bonilla et al., 2018).
Overall, empirical studies which analyse how the emerging technologies influence operational and/or sustainable performance of supply chains as a whole – in terms of productivity, lead times, flexibility, costs, quality, environmental sustainability, social sustainability, economic sustainability, profitability, and shareholder wealth – are worth to be considered.
In addition, despite the growing interest in both circular economy initiatives and inter-organisational collaboration, the research on their relationship is still in its early stages. As also pointed out by the recent review by Jesus and Jugend (2021), there is a lack of both empirical and theoretical research. More generally, there is a lack of research about how instruments, processes, and structures in the area of creativity and innovation management can favour the implementation of circular economy initiatives.
Therefore, the goal of this call is to foster a debate on the relationships between the instruments, processes, and structures in the area of creativity and innovation management, the digital transition through adoption and integration of specific technologies (e.g., cyber-physical systems, internet-of-things, artificial intelligence, advanced robotics, cloud computing/manufacturing, blockchain, additive manufacturing, autonomous vehicles and drones) and the implementation of circular economy initiatives. An area of particular interest is the resulting supply chain performance, along with the factors that might affect the aforementioned relationships.
Examples of relevant research questions include:

- Which are the most relevant creativity and innovation management practices supporting circular economy initiatives?
- To what extent does a different context (e.g. Small and Medium Sized-Enterprises vs Large Enterprise) influence the role of such practices in supporting circular economy initiatives?

- Which factors influence the relationship between creativity and innovation management practices and circular economy initiatives?
- How can inter-organisational collaboration facilitate circular economy initiatives?
- How do circular economy initiatives change according to the innovation approach (open vs closed)?
- Under which circumstances might open innovation stem from circular economy initiatives?
- Which are the advantages and disadvantages of adopting an open innovation approach while implementing circular economy initiatives?
- How can the benefits of diverse stakeholders be harnessed through the management of innovation processes?
- How does the role of inter-organisational collaborations change between circular economy initiatives in mass-produced goods and complex products and systems?
- Do circular economy initiatives triggered by open innovation perform better than other circular economy initiatives, such as those that are entirely developed internally?
- How do innovation ecosystems intertwine with circular economy initiatives?
- Which are the micro-foundations triggering collaboratively developed circular economy initiatives?
- What are the effects of the digital transition on supply chain performance (e.g., operational, strategic, economic-financial, environmental and social performance dimensions)?
- Or vice versa, how are different performance objectives guiding the adoption patterns of digital technologies in single companies or in the supply chain as a whole?
- What are the contextual factors (e.g., industry, culture, inter-organisational relationships, buyer-supplier relationship governance, etc.) affecting the relationship between digitalisation and supply chain performance?
- How has supply chain performance been affected by the adoption of technology-enabled innovation in organisational practices and buyer-supplier relationships?

The full range of conceptual and empirically-based research methodologies so far successfully adopted in the Management Engineering field – including (but not limited to) case studies, surveys, systematic literature review, and simulation – could be employed by the submitted papers

de Sousa Jabbour, A. B. L., Jabbour, C. J. C., Godinho Filho, M., Roubaud, D. (2018). Industry 4.0 and the circular economy: a proposed research agenda and original roadmap for sustainable operations. Annals of Operations Research, 270, 273-286.

Fatorachian, H. and Kazemi, H. (2021). Impact of Industry 4.0 on supply chain performance. Production Planning and Control, 32(1), 63-81.

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Ghobakhloo, M. (2018). The future of manufacturing industry: a strategic roadmap toward Industry 4.0. Journal of Manufacturing Technology Management, 29(6), 910-936.

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Mignacca, Locatelli, G., & Velenturf, A. (2020). Modularisation as enabler of circular economy in energy infrastructure. Energy Policy, 139. https://doi.org/10.1016/j.enpol.2020.111371

Velenturf, A. P. M., Archer, S. A., Gomes, H. I., Christgen, B., Lag-Brotons, A. J., & Purnell, P. (2019). Circular economy and the matter of integrated resources. In Science of the Total Environment (Vol. 689, pp. 963–969). Elsevier B.V. https://doi.org/10.1016/j.scitotenv.2019.06.449

Velenturf, A. P. M., & Purnell, P. (2021). Principles for a Sustainable Circular Economy. Sustainable Production and Consumption. https://doi.org/10.1016/j.spc.2021.02.018

Zangiacomi A., Pessot E., Fornasiero R., Bertetti M., Sacco M. (2019). Moving towards digitalisation: a multiple case study in manufacturing. Production Planning and Control, 31(2-3), 143-157.

4. **Ride the change: how tourism and heritage sector reacted to the challenge of managing digital transition and the COVID-19 pandemic**

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The emergence of advanced digital technologies has enabled the creation of a new tourism and heritage value eco-system and has redefined the principles and dynamics of tourism service production, distribution and consumption.
A broad area of processes, activities, operations and services is now being completely automated (Ivanov and Webster, 2020) and transformed, in a way to integrate Interoperability, virtualization, decentralization, real-time data gathering and analysis capability, service orientation, and modularity (Pencarelli, 2020) in the tourism and heritage ecosystem.
Also, new digital platforms and infrastructures have emerged to enhance customers and visitors experience, redefine the network of stakeholders and their relationships, as well as to improve firms performance and efficiency (Raguseo and Vitari, 2017). Different smart platforms and solutions have emerged to support tourism firms and heritage organizations to manage, coordinate activities and processes and to monitor in real time their performance (Abrate and Viglia 2016).
These new developments are affecting significantly the strategic orientation of tourism firms and heritage organizations, their network of relationships, the market structures as well as the services production and consumption (Viglia et al, 2016; Gretzel et al. 2015).
Additionally, Industry 4.0 technologies combined with the Covid pandemic situation have created a number of opportunities and challenges for tourism and heritage organizations across the globe. COVID-19 has exacerbated the innovation and transformation challenges for companies and organizations in the field. Tourism firms are steadily using and adopting new advanced technologies to cope with the fast-changing environment and to recover in the Post-Covid phase.
Digital technologies such as social media, big data analytics, artificial Intelligence, robotics, and virtual reality, have been widely used to help travelers, visitors as well as tourism companies to handle the current crisis. Indeed, the use of the technology has skyrocket for shopping, entertainment, promotion, communication, education, and remote working (Donthu & Gustafsson, 2020).
New business models have emerged and a business processes reengineering, supported by big data, Internet of things and artificial intelligence, is taking place in the aim to enhance competitive advantage (Agostino and Costantini, 2021).
Additionally, tourists' behaviors, value and priorities have changed profoundly and have shifted toward greater social presence, dependence on social networking sites, use of digital platforms in all stages of trip planning and a more attention toward social and sustainable values. Still, embracing digital transformation requires the development of a new set of skills and competencies.
Consequently, a new tourism and heritage value chain has arisen, where automation and digital integration is taking place, creating both challenges and opportunities for all actors of the ecosystem.
The purpose of this track is to contribute to improve the understanding of the impact of digital technologies in the tourism and heritage sector and provide guidelines on how to address the digital transformation process in relation to the broad spectrum of emergent technologies (cloud computing, artificial intelligence, blockchain, extended realities, Internet of Things, mobile apps, social media).
It aims to provide a timely, systematic perspective on the management of digital transformation in the light of the pandemic effects that are still relatively unknown.
Topics of interest include, but are not limited to:

- Digital transformation and tourism and heritage value chain
- Digital transformation and advanced technologies (big data, artificial intelligence, augmented reality, blockchain, internet of things, mobile apps social media
- Digital transformation and sustainable management
- Digital transformation, skills. competencies and training needs.
- Digital transformation and tourism education
- Digital transformation and entrepreneurship

- Digital transformation and cultural heritage
- The interplay between digital transformation and sustainability principles
- Digital transformation and resilience in times of crisis
- Digital transformation and performance assessment

Possible research questions include, but are not limited to the following:

- What are the opportunities and pitfalls of digital transformation for tourism firms and heritage institutions?
- What the effects of the Covid-19 pandemic in the tourism, hospitality and heritage sector?
- What will be the general implications of digital transformation on tourism and heritage business models?
- Which skills, competencies and capabilities are required for leading digital transformation in the tourism, hospitality and heritage value chain?
- How will different steps of the value chain be impacted?
- How education programs need to evolve and adapt to respond to and manage the ongoing change?
- Which capabilities, mindsets, skills and competencies at the organizational level are required for managing digital transformation of?
- To what extent is sustainability part of the digital transformation process of the tourism sector?
- What is the role of digital transformation for the resilience of the tourism sector?
- How can the performances and impacts of the digital transformation in the tourism, hospitality and heritage sector be assessed?
- How can data deriving from digital technologies being exploited by tourism and heritage organizations to support decision making?

We encourage conceptual as well as empirical submissions.

Abrate G, & Viglia G (2016) Strategic and tactical price decisions in hotel revenue management. Tourism Management, 55:123–132.

Agostino, D., & Costantini, C. (2021). A measurement framework for assessing the digital transformation of cultural institutions: the Italian case. Meditari Accountancy Research, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/MEDAR-02-2021-1207

Donthu N., Gustafsson A. (2020). Effects of COVID-19 on business and research. Journal of Business Research, 117, 284-289.

Gretzel U, Werthner H, Koo C, Lamsfus C (2015) Conceptual foundations for understanding smart tourism ecosystems. Computers in Human Behaviour, 50:558–563

Ivanov S., Webster C. (2019), Robots, Artificial Intelligence and Service Automation in Travel, Tourism and Hospitality, Routledge.

Pencarelli, T. (2020). The digital revolution in the travel and tourism industry. Information Technology & Tourism, 22(3), 455-476.

Raguseo, E., & Vitari, C. (2017). The effect of brand on the impact of e-WOM on hotels' financial performance. International Journal of Electronic Commerce, 21(2), 249-269.

Viglia, G., Werthner, H., & Buhalis, D. (2016). Disruptive innovations. Information Technology & Tourism, 16(4), 327-329.

5. The role of technology in education

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The Covid-19 outbreak has highly accelerated the ongoing digital transformation of education. This accelerated transformation involved both the supply (i.e., companies) and the demand sides (i.e., schools, universities and companies carrying out corporate education). International research evidence is contributing to understand the scale and the impact of the phenomenon on teaching and learning, assessing the possible effects of new technologies and learning formats. In this context, the proposed track pursues two objectives: (i) to provide empirical evidence on the relative impact of technology on educational outcomes (student achievement, and other measurable outcomes such as student engagement or satisfaction); (ii) to provide empirical evidence on how organisations (i.e., schools, higher education institutions, business schools and companies) are reshaping to meet the challenges imposed by the digital boost. The emergency pushed organisations worldwide to rely on digital technologies and paved the way for further implementation possibilities. In this context, it is particularly relevant to investigate the managerial, technological, organisational, and economic implications sparked by alternative models and designs for programs.
The session provides valuable academic and practical contributions that are particularly relevant for national and international audience. Given the relevance of the topic, bringing evidence and reflecting on the impact of educational technology is a necessary step to contribute to the realm of knowledge on digital transformation in education. Aside from the emergency context, research on the topic enriches profoundly our knowledge of what education will be in the future.

6. SMEs in the midst of change

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The recent global financial crisis (2008–2012), the global COVID-19 pandemic (2020-ongoing) and the Russian-Ukrainian war (2022-ongoing) are threatening and stressful external shocks that are causing financial distress as well as reducing both the demand and financial availability of firms in an unexpected way (Iborra et al., 2020). These changes have repercussions on supply chains, production systems and business models in general (Pizzi et al., 2021). Disruptions like these ones are particularly severe for small and medium-sized enterprises (SMEs), which have fewer resources and have to face more concentrated risk than large companies due, for instance, to their lower diversification. Some SMEs are able to survive and recover, but others are disappearing – up to 9% per year in Europe (EUROSTAT, 2018). Understanding under which conditions and how SMEs are able to strategically transform and quickly react to changes is relevant for both scientific and practical purposes.

Small and medium-sized enterprises (SMEs), and family SMEs in particular, constitute the backbone of most economies worldwide: SMEs represent 99% of firms, 66,4% employment and 53% average added value in the European Union (Clark, 2021; Valenza et al., 2021). Despite the size-related constraints they face, SMEs can engage in strategic transformation with consequences on their network configuration, supply chain arrangements, business model innovation (BMI) and, ultimately, on their survival and success.

In a context characterized by severe exogeneous changes, e.g. technological, social, geopolitical disruptions, as well as endogenous challenges, e.g. CEO change, employee turnover, or ownership transition, SMEs might consider to pursue novel activities and engage in distinctive practices to survive and prosper. Corporate entrepreneurship initiatives, open innovation, and high-growth trajectories are some of the topics around which the session will be organized. The theoretical and practical relevance of these topics is briefly discussed in the following:

Corporate Entrepreneurship:

Corporate entrepreneurship encompasses initiatives of transformation of the firm entailed at its rejuvenation. It includes strategic renewal, namely "the process, content, and outcome of refreshment or replacement of attributes of an organization that have the potential to substantially affect its long-term prospects" (Agarwal and Helfat, 2009: 282) such as BMI and digital transformation, and corporate venturing, which involves entrepreneurial efforts to invest in and/or create new businesses by an established firm (Sharma & Chrisman, 1999). Even though some authors have explained that CE can be relevant for large corporations as well as small and medium sized enterprises, there is a need for further studies focusing on the nature of CE (e.g., focus, goals, form and size) comparing large companies and SMEs (Urbano et al., 2022; Zahra et al., 2000).

Illustrative research questions:

- When, why and how do SMEs engage in strategic renewal and corporate venturing?
- Do SMEs engage in such entrepreneurial initiatives differently and/or with different outcomes/goals than large firms?
- Do the governance structure of SMEs (e.g. family control) affect the corporate entrepreneurship process?

Open innovation:

In spite of increasing interest in open innovation, namely the tendency to increasingly rely on outside information and research collaborations to develop new products, services and processes, discussion about the concept and its potential application to the SME sector has been mostly excluded from mainstream literature (Lee et al., 2010). SMEs are found to pursue open innovation according to market-related logics such as meeting customer demands, or competing with rivals, with their most critical challenges mainly associated with organizational and cultural issues as a consequence of dealing with increased external contact (Van de Vrande et al., 2009). The lack of resources in SMEs is said to be a barrier to OI, but at the same time this shortage is cited as a motive for looking beyond organizational boundaries for technological knowledge. Given that the argument about the effect of firm size on the effectiveness of innovation is still ongoing, it is worth addressing the issue from an SME perspective (Spithoven et al., 2013).

Illustrative research questions:

- When, why and how do SMEs engage in open innovation?
- Do SMEs engage in such innovation initiatives differently and/or with different outcomes/goals than large firms?
- Do the governance structure of SMEs (e.g. family control) affect the open innovation process?

High-Growth:

The high-growth phenomenon, measured as compound annual growth in sales or employees above 20%, has attracted the attention of management and entrepreneurship scholars alike (Demir et al., 2017). High growth is deemed important for economic development, innovation, and wealth creation. Researchers argue that understanding more about firm growth patterns should be a key objective of scholarly efforts (Hart et al., 2021), as they are highly relevant to government policy agendas. The relevance of this phenomenon is particularly evident considering SMEs. On the one hand, SMEs have the flexibility to adapt quickly to changes, and might thus be good candidates to pursue high-growth patterns. On the other hand, they may suffer from resource and governance constraints, thus unable to identify or unwilling to embrace such exceptional growth patterns.

Illustrative research questions:

- When, why and how do SMEs achieve high growth?
- Do SMEs pursue high-growth patterns differently and/or with different outcomes/goals than large firms?
- Do the governance structure of SMEs (e.g. family control) affect the high-growth pattern pursued?

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Hart, M., Prashar, N., & Ri, A. (2021). From the Cabinet of Curiosities: The misdirection of research and policy debates on small firm growth. International Small Business Journal, 39(1), 3-17.

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Urbano, D., Turro, A., Wright, M., & Zahra, S. (2022). Corporate entrepreneurship: a systematic literature review and future research agenda. Small Business Economics, 1-25.

Valenza, G., Caputo, A., & Calabrò, A. (2021). Is small and medium-sized beautiful? The structure and evolution of family SMEs research. Journal of Family Business Management.

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Zahra, S. A., Neubaum, D. O., & Huse, M. (2000). Entrepreneurship in medium-size companies: Exploring the effects of ownership and governance systems. Journal of Management, 26(5), 947–976.

7. Addressing complexity to design networks for economics, innovation, management and organization

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This track focuses on the topic of complexity that is receiving increasing attention both from scholars and practitioners. It is recognized as a fundamental aspect of nowadays economies, markets, and organizations.. For example, related to the disruptive effects of the COVID-19 pandemic, complexity science proved invaluable in dealing with uncertainty and addressing economic and virus-diffusion dynamics. Results of complexity models can be very useful to support the decision-making process of governments, policymakers, managers, companies, and organizations belonging to the business ecosystem. Accordingly, finding new ways to change people's mindsets and rethink management systems, value chains, and organizational structures has become the new imperative in economics and management research. In this sense, complexity principles demonstrated being effective as a reference to understand the competitive, economic, environmental, and social dynamics affecting businesses nowadays.

Personal and collective behavior, decision-making processes, management approaches and organizational practices are characterized by social and economic relationships, which are well described using complexity and its tools. In other words, complex systems are composed of interdependent agents that can be found everywhere on multiple scales, from the macro-level, including industries, markets, and countries, to the micro-level, involving firms, work teams, and individuals. Similarly, modern organizations face a wide range of problems, which present different configurations/dimensions of complexity, such as: 1) diversity and heterogeneity of agents and their connections, 2) interdependent structures between agents, 3) ambiguity of available information, and 4) environmental dynamics. In this regard, methodologies based on agent based modeling, network analysis, system dynamics, text mining, evolutionary game theory, and percolation theory are very suitable.

In addition, the diffusion of new technologies for massive data collection offers the opportunity to measure and evaluate complex system dynamics through data-driven methodologies. New tools can be used to collect large amounts of rich, high-quality and reliable data, in almost real time. They provide automatic and more objective measurements of individual, team and firm behaviors, supporting scholars in the analysis of complex systems.

This session is dedicated to innovative research at the nexus of complexity science and network science. The papers presented in this session should discuss new methods, applications, or theoretical approaches. We are interested in basic and applied studies. We invite manuscript submissions that: investigate the drivers of complexity in management systems, value chains (and business ecosystems), and organizational structures; analyze the relationship between complexity and resilience, fostering sustainability of the economy, a green-energy transition, and innovative and unconventional policies and regulation measures to support also social sustainable innovation processes; explore approaches and tools adopted by companies to self-organize and adapt to the complexity of their external environment.

Research that digs into the complexity of big data is also welcome. In particular, while text mining and social networks have evolved into mature yet still quickly advancing fields, the work at their intersection lags behind on theoretical, empirical, and methodological foundations.

8. The role of emerging technologies for the achievement of SDGs in an Industry 5.0 perspective

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The rise of emerging technologies in the international landscape generated a disruptive impact on the business world. The technological choices that organizations should face in order to maintain a competitive advantage and, at the same time, guarantee sustainability are highly complex. Industry 4.0 is supporting business models transformation by leveraging efficiency, flexibility and productivity and providing huge opportunities for innovation and competitiveness (Ibarra et al., 2015; Rüßmann et al., 2018).
The emerging technologies on which the Industry 4.0 paradigm is built may also improve industrial sustainability, from both the environmental and the social point of view (Muller et al., 2018; Stock & Seliger, 2016). Indeed, the new Industry 5.0 paradigm promotes a vison of industry that aims beyond efficiency and productivity reinforcing the role and the contribution of industry to society. Yet, even if both Industry 4.0 and sustainability have gained high attention from both academia and practitioners, literature on the relationships between these two topics is still incomplete (Beltrami et al., 2021). Therefore, the track calls for papers and researches aiming to increase the body of knowledge on the interplay between the use of emerging technologies for business transformation and the attainment of Sustainable Development Goals (SDGs).
The potential topics for the track may include, but are not limited to papers:

- Analyzing environmental and social implications of Industry 4.0 technologies;
- Investigating how Industry 4.0 technologies can promote new sustainable business models;
- Suggesting environmental and social sustainability assessment systems for Industry 4.0 technologies;
- Investigating corporate governance mechanisms for Industry 4.0 technologies enhancing environmental and social sustainability;
- Analyzing sustainable supply chain management enhanced by Industry 4.0 technologies;
- Investigating the contribution of Industry 4.0 technologies to the attainment of SDGs;
- Analyzing how Industry 4.0 technologies enhance both business and sustainability performances;
- Investigating different implementation opportunities of sustainable-oriented Industry 4.0 technologies in different industries;
- Analyzing differences in implementation of sustainable-oriented Industry 4.0 technologies between large companies and SMEs.

Papers can be both conceptual and empirical, including, but not limited to, literature reviews, case studies, surveys, secondary data analysis and simulations. The inclusion of practical and managerial implications leveraging on the results are welcome. The publication of a Special Issue in an academic journal is under evaluation.

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9. Higher education and manifestations of entrepreneurship: towards a multifaceted perspective

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In face of to the undisputed importance of entrepreneurship for economic growth and social development (Audretsch & Keilbach, 2008; Stuetzer et al., 2018; Van Praag & Versloot, 2007), higher education institution (HEI) ecosystems represent a fertile ground for entrepreneurship in several respects (Siegel & Wright, 2015). In terms of teaching (i.e. first mission), university play a central role in equipping its members with entrepreneurial skills, through specific entrepreneurship education programs (Hahn et al., 2020) or through the design of course of studies that combine technical and managerial education (Colombo & Piva, 2020). In terms of research (i.e. second mission), HEIs are a source of knowledge spillovers, such as new technologies and innovations, that can be commercialized by new ventures (Agarwal & Shah, 2014; Lindholm-Dahlstrand et al., 2019; Shah & Pahnke, 2014). In terms of the third or entrepreneurial mission, HEI and the stakeholders connected to the university, such as incubators or science parks, – together forming the HEI ecosystem (Graham, 2014) – also provide infrastructures and resources that support technology transfer and the creation of new businesses (Civera et al., 2020; Lyons & Zhang, 2018). For all these reasons, the research field of university-based entrepreneurship exponentially grown in the last decade (Fini et al., 2018; Guindalini et al., 2021).

However, while research has largely acknowledged the pivotal role of HEI ecosystems in driving entrepreneurship, less is known on how different configurations of HEI ecosystems lead to various manifestations of entrepreneurship, defined as the identification and exploitation of new business opportunities through venture creation or within existing organizations (Shane & Venkatamaran, 2000). For example, HEI are known to generate both academic entrepreneurship and student entrepreneurship. The former describes entrepreneurial engagement of faculty (Perkmann et al., 2020) and can have various forms, ranging from the creation of academic spinoffs to research collaborations with industry. Student entrepreneurship, instead, indicates those entrepreneurial activities undertaken by university students and recent graduates (within 5 years after graduation; Colombo & Piva, 2020). Even though most research has focused on academic entrepreneurship, student entrepreneurship has the greatest impact on national economies and innovation systems (Åstebro et al., 2012; Wright et al., 2017).

Additionally, we urge to know more about the outcomes of the entrepreneurial activities undertaken by scientists (Mathisen & Rasmussen, 2019) or fresh graduates (Eesley & Lee, 2021) in order deepen our understanding on the extent and conditions under which manifestations of entrepreneurship generated by HEI institutions actually yield impact on social and economic development. For these reasons, in order to stimulate more research on how HEI ecosystems influence different manifestations of entrepreneurship and their impact, this track looks for papers at the that focus on various types of entrepreneurial activities generated by HEIs, embracing a micro, meso or macro-level of analysis or a multilevel approach. Bringing together scholars from different research areas (e.g., higher education, regional studies, technology entrepreneurship, new venture creation, career studies, entrepreneurial finance) and disciplines (e.g., economics, innovation, entrepreneurship, management, social psychology) that reflect the heterogenous and complementary research expertise of the organizers, the goal of this track is creating a fruitful debate on the role of HEI ecosystems in driving socio-economic development through entrepreneurship.

We think that our track could nicely fit into the conference because it stimulates a scholarly debate on the role of research and education in driving the commercialization of innovations. In particular, by combining the focus on technologies with attention to managerial aspect, management engineering scholars and educators can provide a valuable contribution in steering education and research towards the promotion of entrepreneurial endeavors. This is crucial for the development of the engineering field, as recently emphasized by the COPI (Conferenza per l'Ingegneria) position paper "Ingegneria 2040: le nuove sfide nella formazione degli ingegneri nella società della conoscenza". Additionally, attending the track can benefit scholars who have the opportunity to learn more about this intriguing, pervasive and growing research field that has been attracting interest from the broader (Fini et al., 2019), entrepreneurship (Abootorabi et al., 2021) and innovation (Bruneel et al., 2021). Indeed, numerous scholars at both national and international level have expressed the interest for the track.

Some potential topic areas we suggest are (but not limited to):

- How do specific elements of the HEI ecosystem, such as educational offerings, lead to different forms of student entrepreneurship (not just venture creation but also intrapreneurship in SMEs and corporations as well as succession in family firms, cf. Hahn et al., 2021)?
- What are the antecedents and outcomes of necessity vs. opportunity-driven university-based entrepreneurship (cf. Civera et al., 2020)?
- What are the development trajectories of different types of academic spinoffs (e.g., research-transfer, method-transfer or competence spin-offs, cf. Müller, 2010; professor vs student start-ups, cf. Roche et al., 2020)?
- What is the relationship between the university research orientation (cf. Centobelli et al., 2019) on the performances of university-based spin-offs, such as fundraising and commercialization?
- To what extent and under which circumstances does entrepreneurship education foster social entrepreneurship (cf., Åstebro, & Hoos, 2021)?
- How do HEI ecosystem foster female entrepreneurship?
- What is the impact of university-entrepreneurship, for example in terms of job creation, inclusiveness, innovation and economic growth?
- To what extent does university governance and leadership affect different forms of academic engagement, such as patenting or research collaborations with industry (cf. Perkmann et al., 2021)?
- What are the career outcomes of student entrepreneurs (e.g., well-being, cf. Hahn, 2020, or wages, cf. Merida & Rocha, 2021) and of academic scientists (e.g., research productivity, cf. Fini et al., 2022)?
- How does socialization in HEI ecosystems (cf. Kacperczyk, 2013) affect the formation and performances of entrepreneurial teams of student or academic start-ups?
- How does university involvement in university-based firms affect their attractiveness to investors (cf. Colombo et al., 2019) or corporate buyers (cf. Mathisen et al., 2021)?
- What the antecedents and outcomes of firms founded by star scientists (cf. Roche et al., 2020)?

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10. The evolution of consumer behavior when dealing with digital technologies and platforms

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The aim of this track is to trigger discussion on how new digital technologies and platform business models are affecting consumer behaviours. In particular, it will explore the main opportunities and challenges coming from the new digital and virtual environments (e.g., virtual branded experiences, augmented reality, immersive experiences) born in the last years. The track intends also to shed light on how these new environments may facilitate the cooperation among multiple actors in the definition, delivery, and consumption of products and services, and on how they may impact the interactions between companies and consumers from different points of view, such as in terms of efficiency, effectiveness, and quality of the marketing activities.

We invite scholars of different disciplines, such as marketing management, strategy, and innovation management, to share their latest research about the new digital market environment with respect to the impact on the company-consumers relationship. In particular, we welcome qualitative and quantitative contributions, both empirical and reviews, for a deep understanding of how marketing could leverage digital technologies and ecosystems to reshape the relationship with the market.

Due to the newness of the topic, we welcome both empirical and conceptual papers open to a variety of methods, including qualitative methods, surveys, observation, experiments (laboratory or field), data analytics (social network analysis, text mining, machine learning). More specifically, the following topics are welcome:

- How to shape digital and interactive marketing environments (including research on social media, online advertising, omnichannel marketing and retailing, influencer marketing, recommendation systems, chatbots, mobile marketing, technology-enabled marketing systems)
- The impact of digital technologies on marketing activities performance (in terms of efficiency, effectiveness, and quality).
- The influence of immersive virtual experiences on brand perceptions, purchase decisions, and individuals' affective and behavioral responses
- Relevant experiences about the implementation of digitally enabled marketing strategies and initiatives

11. Platform thinking for innovation: from crowdsourcing to business transformation

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While technology (often) let the role of innovation trigger to business models (Rayna and Striukova, 2016), platforms became one of the most successful innovative ones in many fields. Platforms even challenged entire fields like taxi market or accommodation, thinking about the usual suspects like Uber and Airbnb (Yoffie, Gawer and Cusumano, 2019).
Over the years, platforms proved their ability to leverage idle assets – being there on the market or within existing firms – to grow, become bigger and more relevant (Trabucchi, Sanasi, Ghezzi and Buganza, 2021). In doing so, they often rely on the power of data (Trabucchi, Buganza and Pellizzoni, 2017) to exploit new business and innovation opportunities (Wang, Zhang and Song, 2020).
Even if platforms are "nothing new", the importance of platform-based businesses in the modern economy is growing continuously and becoming increasingly relevant. Specifically, the deployment of digital technologies has enhanced the applicability of multi-sided business models, enabling companies to act not just as builders and owners of assets, but as orchestrators of external resources. Management research has therefore focused increasingly on the unique aspects of this model. At the center of a multi-sided platform there is a platform provider that enables a transaction between the sides, reducing the relative transaction costs. Two-sided platforms (or formerly two-sided markets) are businesses that "enable interactions between end-users, and try to get the two (or multiple) sides 'on board' by appropriately charging each side" (Rochet and Tirole, 2006, p. 645). In other words, these platforms act as match-makers between two (or more) different but interconnected groups of users: travelers and hosts for Airbnb, riders and drivers for Uber, project creators and funders for crowdfunding platforms, app developers and app users in mobile app markets, creating indirect network effects (Katz and Shapiro, 1985).
Among others, crowdsourcing platforms represent a specific kind of two-sided platforms that have attract the interest of scholar since able to stimulate creativity, generate new knowledge and generate innovation (Koholer, 2015; Mazzola et al., 2020; Piazza et al., 2022). Indeed, crowdsourcing platform act as intermediaries who provide a two-sided marketplace with one group of users, known as seekers (usually firms), broadcasting innovation-related tasks, and another large and undefined group of users, known as solvers, working on these tasks by submitting solutions (Mazzola et al., 2018).
The peculiarities of this market structure have been investigated over the last two decades in the economic literature. Particularly, specific attention has been devoted to the pricing mechanisms and the role of the network externalities (Rochet and Tirole, 2006; Parker and Van Alstyne, 2005). The more recent literature highlights how the resource configuration behind these businesses is significantly different from the companies based on linear value chains (Amit and Zott, 2015) or how the development process can be particularly challenging (Perks et al., 2017). Furthermore, these companies need to design and manage complex business models based on a double value proposition (Muzellec et al., 2015).
While researchers made a great job in analyzing and offering possible solutions to the issues of platforms, the list of "the usual suspects" that made the platform model successful is long, very long, especially in the tech and service space. Is that all? Still, what are the opportunities that thinking through the platforms lenses – defined as "Platform Thinking", see Trabucchi and Buganza, 2021 – may open up to established businesses? Especially to those fields where the digital transformation is still going on but are suffering from the increased competition coming from the "new worlds"?
To take advantage of this innovative business model, innovation leaders must understand platforms, their opportunities and challenges, and their power and limitations. This is (clearly) important in the world of digital services, but also in the brick and mortar industries, in the industrial space and in all those fields that may go through a "platformization" process to gain back their relevance.
Few recent studies highlight that companies are also looking in this direction. This call for submission aims at stimulating research in this direction, with topics that may include, but are not restricted to:

- The application of platform thinking or platformization process to industrial setting
- The evolution of product platforms in multi-sided platforms

- The transformation towards platform ecosystems of retailers and physical businesses
- The opportunities of data-driven business models based on platform mechanisms in industrial setting
- The role of crowdsourcing platforms in matching demand and supply for technological, sustainable, and social innovation
- The design of value capture and value creation mechanisms in crowdsourcing platform
- The use of crowdsourcing platforms for pursuing business model innovation strategies

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12. Healthcare organizations in digital transition: lesson learned and future challenges

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Healthcare organizations are constantly pushed to improve the quality of care services in a context characterized by profound demographic, epidemiological and socio-economic changes (Lega et al., 2013). Population ageing, the steady increase of service demand from citizens and patients, the growing costs of innovative medicines, and the widespread implementation of cost containment policies are some of the factors that have increased the pressure on hospitals to embrace digital transformation (Mishra et al. 2022). Recently, innovative digital solutions have been adopted in many healthcare organizations to increase the efficiency of healthcare services as well as hospital performance (Kraus et al., 2021). Electronic Health Records, blockchain, telemedicine, cloud-based tools, and Artificial Intelligence (AI) are not only enabling a proper management of the high complexity of healthcare processes (Marques and Ferreira, 2020) but also providing practitioners with a huge set of opportunities to improve the effectiveness of clinical pathways and the delivery of cost-effective healthcare services. COVID-19 has accelerated this digital transition. Indeed, digital tools have been applied to address acute needs that have arisen as a direct or indirect consequence of the pandemic (e.g., apps for patient tracing, remote triage emergency services). Many of the solutions that have been implemented during the emergency could be consolidated in the future, contributing to the definition and adoption of new digital models of care.

Nevertheless, the benefits of adopting digital technologies are not always visible due to the lack of a coherent ecosystem able to support and drive forward the initiatives undertaken within individual healthcare organizations. To exploit their potential, care networks need to be reinvented following a multi stakeholders approach that actively involves and takes into account the needs of all actors operating at different levels to provide personalised healthcare services. Consequently, national healthcare systems and health organisations are required to rethink traditional care paradigms and move towards adopting a new model of "connected ecosystem" (Dougherty and Dunne, 2011), where all actors cooperate to improve the care services. This prioritises the redesign and re-engineering of healthcare processes (Gilmartin and D'Aunno, 2007; Drummond et al., 2013). Furthermore, to be effective, digital innovation should contaminate the whole healthcare chain, from the adoption of new technologies (drugs, medical devices, diagnostic and clinical procedures/protocols, as well as clinical pathways), to the implementation of evidence-based approaches, capable of supporting the decision-making process and measuring healthcare outcomes.

This track aims at triggering discussion on digital innovations to give evidence to the lessons learned in recent years, also in light of the pandemic, and to better understand the challenges that the healthcare system faces in implementing a "connected ecosystem", going beyond the boundaries of individual healthcare organizations. Moreover, it intends to shed light on how digital technologies may facilitate the cooperation among multiple actors in the delivery of cross-organizational healthcare services, and how they may affect performance. This track welcomes qualitative and quantitative contributions, empirical studies, and reviews, to investigate how healthcare organizations could leverage digital innovations and rethink their operations, processes, supply chains, and networks, pursuing multiple performance objectives. We encourage scholars of different disciplines, such as healthcare management, operations management, innovation management, information science and evidence-based management, to share their latest results.

The proponents of this track aim at collecting original and mature contributions to stimulate the debate among attendees, concerning, but not limited to, the following topics:

- Which is the current adoption level of digital technologies in the healthcare context? Which enablers and barriers influence their diffusion?
- Which are the most relevant experiences arising from their implementation in healthcare organisations?
- Which could be the levers (e.g., technological, policy-based, etc...) that can be used to accelerate the development of an effective digital innovation ecosystem in healthcare after the COVID-19 pandemic?

- How does digitalization influence horizontal collaboration (with actors at the same level of the value chain) and vertical collaboration (with actors at different levels of the value chain) in the healthcare context?
- How do digital technologies impact the integration and coordination between hospital-based and community-based healthcare services?
- How does digital innovation change business models and service delivery in healthcare organisations?
- How could digital technologies support the redesign and co-creation of health services, both from intra- and inter-organizational perspectives?
- How can data available from innovative technologies inform the human-centered design of healthcare services?
- What is the effect of digitalization on the performance of healthcare organizations?
- Which new competencies should be developed by all actors in the healthcare sector? How should both patients and professionals be empowered through new competencies and fully exploit innovations?
- Which new organizational challenges emerge when designing and implementing digital technologies into clinical pathways and processes?
- How can data-driven techniques be used to analyse inter-organizational processes and evaluate the performance of a digital innovation ecosystem in healthcare?
- Which techniques and methodologies support the evaluation of tech-enabled solutions, with a multi-stakeholder approach?
- What about the emergence of digital health start-ups and new entrepreneurial digital ventures in healthcare? Which are the main barriers/enablers of their growth? How might hospitals and other healthcare organizations benefit from them, through the development and adoption of innovative open innovation strategies?
- How could the digital transition positively affect the healthcare supply chain management?

These themes are original and pave the way for expanding existing research, as they have not been fully investigated in the literature within the healthcare context.

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13. Organizations in times of digital transformation: from digitalization capabilities to resilience

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Digitalization is transforming organizations by advancing knowledge and creating new value for customers. Using the concept of digital transformation, we refer to topics of Smart Manufacturing, Industrial Internet of Things, Digital Factory, and Industry 4.0, which concur to rethink of industrial domains. For example, manufacturing firms interact with their customers by providing a richer user experience (Nylen and Holmstrom, 2015), enabling new connected product functionalities and integrating various operational processes, so that opportunities to co-create value through advanced service offerings are strengthened (Porter and Heppelmann, 2014; Lenka et al., 2017).

Although digitalization represents a new way for organizations to secure future competitiveness, the full potential of digitalization capabilities has not been largely realized. A key reason for lacking large scale digital transformation is connected to the inability of firms to understand and address management issues, including organizational resilience in the IT domain, or cyber resilience. We invite authors to submit contributions analysing the consequences of digitalization in organizations.

Topics must be focused on managerial and organizational aspects as well as they may target company or ecosystem at both strategic and operational level.

The topics of interest include, but are not limited to:

- Digitalization capabilities for organizational resilience and competitiveness;
- Approaches, mechanisms, activities and processes resulting in the implementation of digital platforms;
- Ecosystem perspective on development of digitalization capability for realizing potential of competitiveness;
- Correct balance of resources to be allocated in developing digitalization capabilities;
- Development and exploitation of digitalization capabilities for cybersecurity;
- Digitalization capabilities driving new business models for exploiting cyber environment.

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14. **Predictive and prescriptive analytics to support the decision-making process in reshaping services of general interest and industrial networks: models, methods, and applications**

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In the last decades, governments and institutions across various western countries have been engaging in deep public spending reviews as part of broader austerity measures introduced to reduce the deficit and public debt (Alonso et al., 2015). From the organizational point of view, this has led to the adoption of a new paradigm for public administration, generally referred to as "New Public Management" (NPM, see Hood, 1991; Hood, 1995), that put great emphasis on cost minimization and efficiency objectives. The widespread diffusion of digital technologies has further triggered this phenomenon, having changed consumers' habits and behaviors and endangered traditional business models for service provision (Bruno et al., 2021a; Bruno et al., 2021b). In this context, public authorities have implemented reforms to rationalize services in multiple sectors (e.g., education, healthcare, justice), with a general trend toward service capacity downsizing, facility closure, merging, and the consolidation of service provision in high densely populated areas. In light of this evidence, the NPM paradigm has been criticized for neglecting important public values, such as equity (Reiter and Klenk, 2019), thus producing disparities in access to essential services among population groups. The recent COVID-19 pandemic has reinforced this criticism, stimulating a profound reflection on the territorial organization of public services. Notably, the very recent EU multiannual recovery plan allocates a large amount of the total budget for Cohesion, Resilience, and Values "to strengthen economic, social and territorial cohesion", focusing on disadvantaged regions and areas (European Commission, 2021). Therefore, the debate around the spatial organization and the accessibility to services of public and general interest is regaining momentum.

Private service sectors are no exception. The series of events characterizing the very recent years (e.g., the 2020 Russia-Saudi Arabia oil price war, the 2021-2022 global supply chain crisis, the Russia-Ukraine war) has stopped the growth of leading industries (e.g., aviation), causing demand contraction, severe supply chain disruptions, and posing challenges on the environmental and social sustainability of service provision.

In this scenario, private and public decision-makers are asked to strategically redesign their networks to ensure social/user-oriented objectives (quality, safety, affordability, equal treatment, or universal access) and economic goals (performance, revenues/cost optimization). As these objectives are (rather intuitively) often conflicting in nature, solving the underlying problem requires quantitative methodologies capable of acting as decision-support tools.

Therefore, this track aims to collect contributions from the AiIG members dealing with analytical models and methods to address relevant problems emerging in public/general interest service sectors and industry. The track covers a broad range of quantitative methodologies, especially belonging – but not limited - to the following domains: econometric and mathematical models, spatial analyses, forecasting techniques, simulation, and optimization approaches. Papers providing reflective accounts describing successful applications of the above methodologies are particularly welcome. There are no strict requirements in terms of application field, and the use of real-world data is highly encouraged, if applicable. Papers with a methodological focus must demonstrate their ability to provide insightful managerial implications improving the practice of such tools through extensive computational experiments. Studies providing descriptive analysis are also in scope, as long as policy implications are carefully fleshed out from the results.

Specifically, the proponents are keen to receive contributions stimulating the debate and raising the attention within the community around the following topics:

- What decisions and objectives should decision-makers take into account to reshape service networks?
- What are the criteria, constraints, and measures to optimize for achieving efficient and effective service provision?
- What key aspects and indicators should be considered to assess services' accessibility? What are the determinants and geographical patterns of inequalities related to services' territorial organization? How do geographical aspects relate to socio-economic ones, and how can this evidence support reorganization actions?

- What are the decisions/actions that should be implemented toward the more efficient utilization of existing resources? What strategies and scenarios could be undertaken to rationalize the existing service networks (undermined by the crisis of traditional business models) without severely impacting consumers' access?
- How can central authorities regulate markets of public interest goods, fostering fair competition and quality objectives for users?
- What are the decisions/actions that decision-makers in the industry should take to react, in the short-term, to the recent crises? How to predict future services' demand scenarios? What decision-makers could do, in a proactive posture, to cope with future demand trends?
- Which modeling frameworks should be considered to support decision-makers in hedging against future uncertainty in demand scenarios?
- How to support decision-making in appraising the redesign of sustainable networks to ensure both the short/middle-term survival of their service sectors and the achievement of long-term environmental goals?

We expect these open questions to draw the attention of scholars from interdisciplinary areas in the AiIG community, with the aim to show the benefits of more consistent integration of decision-support tools into managerial research and practice.

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15. Gender equality in times of transition

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In time of disruptive changes, gender equality is a global priority to improve living conditions of women and men, and a necessary step to the achievement of the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs). While SDG 5 directly aims to achieve gender equality in the public and private spheres, gender needs also to be enshrined in the other SDGs. For instance, evidence exists that gender equality helps to reduce poverty (SDG 1), establish good health and well-being (SDG 3), and to provide quality education (SDG 4). While gender equality is on the development agenda worldwide, we still tackle lack of equality within private and public organizations and the entire society. This issue has stimulated the academic debate in different disciplines.

Within this framework, this Special Track aims to collect papers that tackle gender issues from different perspectives and in the scientific domains that are relevant to the AiIG scientific community. The Special Track is an opportunity to bring together AiIG members that are working on gender issues and to stimulate the debate on this topic.

Accordingly, in this Special Track, we welcome original, multilevel, multi- or cross-country, and methodologically diverse contributions that can extend the debate on gender equality. In particular, as we explain in the following, scholars from different fields have highlighted gender gaps, but an analysis of their implications for sustainability is often lacking.

A brainstorming session with all interested members of the AiIG community for discussing the ongoing activities of the “Commissione Pari Opportunità” will be part of this Special Track.

16. Global production networks reconfiguration and circular economy: synergies between emerging trends

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In the past decades, many companies, attracted by lower costs, decided to move abroad not only low value-added activities - i.e., simple, labour-intensive production tasks - but also high-value company functions-like R&D (Contractor et al., 2010). This phenomenon, known as offshoring, entails the geographical dispersion of a firm's value chain activities, giving rise to global value chains (GVCs) (Gereffi, 2005; Mudambi, 2008) that might expose companies to higher risks (Manuj and Mentzer, 2008), as well as transforming the manufacturing landscape in developed countries (Hallward-Driemeier and Nayyar, 2017). International Business (IB) literature has recently highlighted how "analyzing temporal dynamics of the GVC will likely shed light on the issue of backsourcing, inshoring, and reshoring [...] which also is not sufficiently addressed in extant research" (Kano et al., 2020, p.613). In fact, in the last two decades, companies have started to include other factors, besides costs, in their manufacturing location decisions. A new trend was rising, identified in the literature as back-shoring and defined as "a voluntary corporate strategy regarding the home country's partial or total re-location of (in-sourced or out-sourced) production to serve the local, regional or global demands" (Fratocchi et al., 2014, p. 56). Hence, back-shoring is a phenomenon involving not only manufacturing plants but also - and above all - supplies, which are less complex to be relocated compared to sunk investments. Moreover, location decisions alternative to back-shoring can be considered by companies in their relocation journey, namely near-shoring (i.e., the relocation to a foreign country in the same region of the firm's home country) and further offshoring (the relocation to a second foreign country, different from the host country chosen) (Gray et al., 2013; Fratocchi et al., 2014), thus widening the relocation options. The back-shoring literature has identified a vast set of reasons for this phenomenon (Kinkel and Maloca, 2009; Kinkel, 2014; Bals et al., 2016; Fratocchi et al., 2016; Srai and Ané, 2016; Stentoft et al., 2016; Wiesmann et al., 2017; Barbieri et al., 2018), while the IB literature has identified many elements as a source of reconfiguration of the GVCs. Among others the weakening of international agreements that enforced globalization, the battle for global leadership between the US and China, and the growth of nationalism and populism (Enderwick and Buckley, 2020; Walt, 2020). Moreover, special attention is devoted to the rising concern for social inequalities and environmental changes (Enderwick and Buckley, 2020).

In particular, the circular economy (CE) concept is gaining momentum among scholars and practitioners given the necessity to maintain economic growth while reducing the pressure on the environment, and the consumption of natural resources. Also, the literature considers CE as a system solution aimed at improving economic development, but efforts to discover and analyze the relationships between CE fundamentals and the actual features of contemporary economic systems are relatively underrepresented in the debate. A first area where new research should be developed is the interaction between CE principles and practices, and the international dispersion of production activities. Even when the discussion on CE reaches a macro level (city, region, nation and beyond) (Kirchherr et al., 2017), it does not take into account that the world economy is structured around global production networks in which all the activities that go from the design of a product to end use (i.e. design, production, marketing, distribution and support to the final consumer) are fragmented and spread across several different countries. Also, the IB community seems to consider that CE implementation is appropriate only at the local level and has not yet included a circular approach in its debate (Hofstetter et al., 2021).

The session aims to contribute to the debate on these topics and welcomes empirical, qualitative, quantitative, and conceptual papers. Possible topics include, but are not limited to the following points:

- Effect or outcome generated by multiple drivers of the reconfiguration of global production networks, with particular attention to the digital and sustainable transitions
- Cause for new trends in the destination country, with particular focus but not limited to Italy, as a stimulus to foster attractiveness, competence recreation, innovation and ecosystemic thinking, in turn enabling the digital and sustainable transitions

- Adoption of a CE strategy by members of global production networks, and the implications for the value chain configuration and development CE and the development of regions and countries, including human capital, employment, and entrepreneurship
- Open questions on CE scaling up including the main barriers (e.g., technological and market) and the institutional changes required, including those related to global production networks reconfigurations
- Exploring how CE and global production networks reconfiguration are enabled within innovation ecosystems

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