AI and Cooperation: Towards a new era in inter-organizational relationships

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Special issue information

The special issue (SI), titled "AI and Cooperation: Towards a New Era in Inter-Organizational Relationships", focuses on the transformative impact of artificial intelligence (AI) on inter-organizational collaboration. It explores how AI influences various aspects of these relationships, including its integration benefits/challenges partner selection, governance et management, and possible outcomes.

We expect that the SI will shed light on the transformative potential of AI in inter-organizational relationships (IORs) by addressing critical gaps in current research, offering insights into AI's role in partner selection, governance, and collaboration outcomes, and exploring its ability to overcome challenges like alliance failures, innovation tensions, and ethical concerns. The aim is to provide a deeper understanding of how AI reshapes cooperation, facilitates knowledge sharing, and drives innovation and performance in dynamic and complex inter-organizational settings.

Background and scope

OECD defines an AI (Artificial Intelligence) system as "a machine-based system that can influence the environment by producing an output (predictions, recommendations, or decisions) for a given set of objectives. It uses machine and/or human-based data and inputs to (i) perceive real and/or virtual environments; (ii) insert these perceptions into models through analysis in an automated manner (e.g., with machine learning), or manually; and (iii) use model inference to formulate options for outcomes. AI systems are designed to operate with varying levels of autonomy" (OECD, 2019).

AI's role for inter-organizational collaboration spans various levels—organizational, project/team, and individual—offering unique advantages while introducing notable challenges (Ameye et al., 2023). Additionally, AI has catalyzed innovative forms of partnerships, from bilateral collaborations to complex AI-driven ecosystems (Pagani & Davenport, 2024; Jacobides et al., 2021).

AI is a transformative technology offering numerous benefits for inter-organizational collaboration (Mariani et al., 2023). First, it can enhance human capabilities through augmentation by automating redundant routine tasks (Krakowski et al., 2023). While automation benefits can often be achieved autonomously, augmentation requires collaboration between humans and machines, commonly referred to as co-intelligence (Mollick, 2024).

Second, AI -human collaboration can assist in the generation of ideas and the expansion of the creative space especially in tasks such as brainstorming where human-AI synergy can facilitate greater diversity of ideas (Bouschery et al., 2023) and new product development (Haefner et al., 2021).

Third, generative AI has also unlocked unprecedented levels of creativity, transforming how partnerships ideate and innovate, including fostering prosocial objectives such as sustainable development (Pagani & Davenport, 2024). Indeed, for example, organizations use AI to enhance their agility in collaborative innovation, enabling them to coordinate smoothly with various partners (Gama & Magistretti, 2023). This agility allows firms to build a network of strategic, extended, or virtual partnerships to exploit and explore AI-driven opportunities (Ritala et al., 2024). For instance, Airbus's Skywise platform integrates operational data across global airlines to optimize performance, showcasing how AI ecosystems drive value (Pagani & Davenport, 2024). Finally, AI's ability to enhance organizational agility enables firms to

seize first-mover advantages, bolstering their competitive positioning (Nemeh & Yami, 2019; Nemeh, 2018).

While AI generates unique benefits, it also introduces significant challenges. For example, AI complicates the question of the determination of patent ownership (Hutson, 2023) and may contribute to a gradual decline in the disruptiveness of knowledge over time (Park et al., 2023). Additionally, AI-driven partnerships must prioritize ethics and transparency, as the sharing of sensitive data can pose significant privacy and trust issues (Pagani & Davenport, 2024). Complex ecosystems involving multiple stakeholders, such as research consortia, highlight the difficulty of aligning diverse goals and integrating disparate datasets (Pagani & Davenport, 2024).

Moreover, the selection of partners is a key criterion for analyzing the use of AI in inter-organizational collaboration, as it ensures strategic alignment, technological compatibility and mutual trust, which are essential for maximizing synergies and achieving common goals (Mindruta et al., 2016; Shah, & Swaminathan, 2008). In this vein, AI aids in addressing challenges such as partner screening, evaluation, and selection, ensuring better alignment and collaboration (Shah & Swaminathan, 2008; Bierly & Gallagher, 2007). This is particularly beneficial in dynamic and complex scenarios requiring continuous data collection and alliance strategy adjustments (Cummings & Holmberg, 2012). So, we can imagine that AI can help firms screening a bigger number of potential partners and dynamically analyzing them in depth by avoiding information width and depth trade-off characterizing human rationality.

Regarding governance and management, existing research on AI for inter-organizational collaboration brings valuable insights, while still being limited. The implementation of management mechanisms is critical in inter-organizational collaborations, particularly in complex contexts such as multi-partner alliances (Das & Teng, 2002; Garcia-Canal et al., 2003; Zeng & Chen, 2003; Thorgren et al., 2011) and coopetition (cooperation between competitors) (Fernandez et al., 2014; Telg et al., 2023; Rouyre et al., 2024). These collaborations require a delicate balance between knowledge sharing, which drives innovation, and the protection of sensitive information, which mitigates risks related to opportunism or unbalanced exploitation of shared resources (Fernandez & Chiambaretto, 2016; Fernandez et al., 2021; Le Roy et al., 2022). Without proper management, the risks of misunderstandings, conflicts, or strategic losses significantly increase. In this context, AI plays a central role as a *knowledge broker*. It facilitates knowledge sharing while ensuring the protection of sensitive information, providing greater control over what is shared and what is safeguarded (Bouschery et al., 2023). These dynamics are particularly important in environments where stakeholders need to engage in mutual learning while overcoming challenges related to coopetition. The ability to balance knowledge sharing and protection is essential for the success of such collaborations (Fernandez et al., 2014; Fernandez et al., 2018; Rouyre & Fernandez, 2019; Rouyre et al., 2024; Hurmelinna-Laukkanen & Olander, 2014). Which make it essential to explore coopetition in emerging areas like AI (Corbo et al., 2023; Dabić, et al., 2021).

To implement these management mechanisms, AI supports both formal and informal governance approaches. At the formal level, language models (LLMs) assist in crafting contracts that mitigate opportunism risks (Lin & Darnall, 2015). Informally, AI can bridge cultural gaps in international joint ventures, fostering mutual understanding and trust, which are essential for enduring partnerships (Buckley et al., 1998).

Finally, building on the abovementioned elements, AI can impact the interorganizational collaboration outcomes. For example, adopting AI solutions enhances value

co-creation with external partners, streamlining communication, empowering stakeholders, building trust, and strengthening networks (Li et al., 2021; Verganti et al., 2020). Moreover, at the project level, AI reduces failure rates by improving decision-making, mitigating risks, and optimizing resource allocation (Ko & Cheng, 2007). It also facilitates innovation through platforms like AutoGen, which integrates multiple AI tools to manage complex tasks effectively (Pagani & Davenport, 2024).

Specific areas addressed and potential questions to be addressed

The special issue seeks to explore a range of topics on how AI can impact different aspects of interorganizational relationships. AI opens many possibilities for improving partnerships at the IORs level. However, there remains a notable gap in research exploring these applications in depth. This special issue aims to address these underexplored aspects, advancing our understanding of AI's role in enhancing inter-organizational collaboration. In this special issue, we are particularly interested in, but not limited to, the following themes:

Drivers of AI adoption in IORs:

- What motivates partners to adopt AI at the IOR level?
- What types of AI are chosen for use in IORs?
- Are certain types of AI better suited for specific types of IORs?

At partner selection level:

- How capacities provided by AI can support organizations in the selection of partners?
- How dependency on big-tech developed AI solutions can impact the dynamic of cooperation between them and other organizations?
- How can AI affect the asymmetry among cooperating organizations?

At IORs governance and management level:

- How AI impact the governance of challenging cooperation such as multi-partners alliances? Or cooperation with competitors i.e., "*coopetition*"?
- How can AI as knowledge broker impact the management of value creation/appropriation tensions?
- Can AI play a role in tensions management by play a role of neutral party?
- What role can AI play in facilitating multi-partner alliance management and alliance portfolio?

At the IORs performance/outcomes level:

- How can the use of AI impact interorganizational innovation (Radical/incremental)?
- How we manage the property rights of IOR based innovation where AI is mobilized?
- How can AI facilitate alliances results integration and speed of innovation?
- How can the use of AI contribute to alliance failure reduction?

Ethical considerations of AI adoption in IORs:

- How do partners navigate challenges like patent ownership disputes or the gradual decline in knowledge disruptiveness?
- How do partners prioritize ethics and transparency in AI-driven collaborations?
- What strategies do partners use to manage privacy and trust issues in AI partnerships?
- How do partners align diverse goals and integrate disparate datasets effectively?

Manuscript submission information

All submissions found suitable for peer review will undergo evaluation by at least two independent reviewers. Upon acceptance, the manuscript will proceed to production and be simultaneously published in the current regular issue while being included in the online Special Issue. Articles from this Special Issue will be featured in various regular issues of the journal, distinctly marked and branded as part of the Special Issue.

Important dates

- Submission opening: May 1st, 2025
- Submission Deadline: January 31st, 2026
- 1st Round review decision: May 1st, 2026
- Revised Manuscript due: September 30th, 2026
- 2nd round revision decision January 31st, 2027
- Final revised manuscript: April 31st, 2027
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References

Ameye, N., Bughin, J., & van Zeebroeck, N. (2023). How uncertainty shapes herding in the corporate use of artificial intelligence technology. *Technovation*, 127, 102846.

Bierly, P. E., & Gallagher, S. (2007). Explaining alliance partner selection: Fit, trust and strategic expediency. *Long Range Planning, 40*(2), 134-153.

Bouschery, S. G., Blazevic, V., & Piller, F. T. (2023). Augmenting human innovation teams with artificial intelligence: Exploring transformer-based language models. *Journal of Product Innovation Management, 40*(2), 139-153.

Buckley, P. J., Glaister, K. W., & Husan, R. (2002). International joint ventures: Partnering skills and cross-cultural issues. *Long Range Planning*, *35*(2), 113-134.

Corbo, L., Kraus, S., Vlačić, B., Dabić, M., Caputo, A., & Pellegrini, M. M. (2023). Coopetition and innovation: A review and research agenda. *Technovation*, *122*, 102624.

Cummings, J. L., & Holmberg, S. R. (2012). Best-fit alliance partners: the use of critical success factors in a comprehensive partner selection process. *Long Range Planning*, *45*(2-3), 136-159.

Dabić, M., Marzi, G., Vlačić, B., Daim, T. U., & Vanhaverbeke, W. (2021). 40 years of excellence: An overview of Technovation and a roadmap for future research. *Technovation*, 106, 102303.

Das, T. K., & Teng, B. S. (2002). A social exchange theory of strategic alliances. In F. Contractor & P. Lorange (Eds.), *Cooperative Strategies and Alliances* (pp. 439-460). Elsevier Science, Oxford, UK

Fernandez, A. S., Chiambaretto, P., Chauvet, M., & Engsig, J. (2021). Why do MNEs both make and coopete for innovation? *Technovation*, *106*, 102313.

Fernandez, A. S., Le Roy, F., & Gnyawali, D. R. (2014). Sources and management of tension in co-opetition case evidence from telecommunications satellites manufacturing in Europe. *Industrial Marketing Management*, *43*(2), 222-235.

Fernandez, A.-S., & Chiambaretto, P. (2016). Managing tensions related to information in coopetition. *Industrial Marketing Management*, 53, 66-76.

Gama, F., & Magistretti, S. (2023). Artificial intelligence in innovation management: A review of innovation capabilities and a taxonomy of AI applications *Journal of Product Innovation Management*.

García-Canal, E., Valdés-Llaneza, A., & Ariño, A. (2003). Effectiveness of dyadic and multi-party joint ventures. *Organization Studies, 24*(5), 743-770.

Haefner, N., Wincent, J., Parida, V., & Gassmann, O. (2021). Artificial intelligence and innovation management: A review, framework, and research agenda. *Technological Forecasting and Social Change*, *162*, 120392.

Hurmelinna-Laukkanen, P., & Olander, H. (2014). Coping with rivals' absorptive capacity in innovation activities. *Technovation, 34*(1), 3-11.

Hutson, M. (2023). AI for drug discovery is booming, but who owns the patents? *Nature Biotechnology., 41*, 1494-1496.

Jacobides, M. G., Brusoni, S., & Candelon, F. (2021). The evolutionary dynamics of the artificial intelligence ecosystem. *Strategy Science*, *6*(4), 412-435.

Ko, C. H., & Cheng, M. Y. (2007). Dynamic prediction of project success using artificial intelligence. *Journal of construction engineering and management*, *133*(4), 316-324.

Krakowski, S., Luger, J., & Raisch, S. (2023). Artificial intelligence and the changing sources of competitive advantage. *Strategic Management Journal*, *44*(6), 1425-1452.

Le Roy, F., Robert, F., & Hamouti, R. (2022). Vertical vs horizontal coopetition and the market performance of product innovation: An empirical study of the video game industry., *Technovation*, 112, 102411.

Li, S., Peng, G., Xing, F., Zhang, J., & Zhang, B. (2021). Value co-creation in industrial AI: The interactive role of B2B supplier, customer and technology provider. *Industrial Marketing Management*, *98*, 105-114.

Lin, H., & Darnall, N. (2015). Strategic alliance formation and structural configuration. *Journal of Business Ethics*, *127*, 549-564.

Mariani, M. M., Machado, I., Magrelli, V., & Dwivedi, Y. K. (2023). Artificial intelligence in innovation research: A systematic review, conceptual framework, and future research directions. *Technovation*, *122*, 102623.

Mindruta, D., Moeen, M., & Agarwal, R. (2016). A two-sided matching approach for partner selection and assessing complementarities in partners' attributes in inter-firm alliances. *Strategic Management Journal*, *37*(1), 206-231.

Mollick, E. (2024). Co-Intelligence. Random House UK.

Nemeh, A. (2018). Building a first-mover advantage from coopetition. In A.-S. Fernandez, P. Chiambaretto, F. Le Roy, & W. Czakon (Eds.), The Routledge Companion to Coopetition Strategies*. Routledge.*

Nemeh, A., & Yami, S. (2019). Orchestrating resources for FMA in coopetitive NPD. *R&D Management*, *49*(1), 64-85.

Organization for Economic Cooperation and Development (OECD). (2019). *Measuring the Digital Transformation: A Roadmap for the Future.* OECD Publishing. https:// doi.org/10.1787/9789264311992-en.

Pagani, M., & Davenport, T. H. (2024). How AI changes partner collaboration. *MIT Sloan Management Review*. Retrieved from https://sloanreview.mit.edu/

Park, M., Leahey, E., & Funk, R. J. (2023). Papers and patents are becoming less disruptive over time. *Nature*, 613(7942): 138-144.

Ritala, P., Aaltonen, P., Ruokonen, M., & Nemeh, A. (2024). Developing industrial AI capabilities: An organisational learning perspective. *Technovation*, *138*, 103120.

Rouyre, A., & Fernandez, A. S. (2019). Managing knowledge sharing-protecting tensions in coupled innovation projects among several competitors. *California Management Review*, *62*(1), 95-120.

Rouyre, A., Fernandez, A. S., & Bruyaka, O. (2024). Big problems require large collective actions: Managing multilateral coopetition in strategic innovation networks. *Technovation*, 132, 102968.

Shah, R. H., & Swaminathan, V. (2008). Factors influencing partner selection in strategic alliances: The moderating role of alliance context. *Strategic Management Journal*, *29*(5), 471-494.

Telg, N., Lokshin, B., & Letterie, W. (2023). How formal and informal intellectual property protection matters for firms' decision to engage in coopetition: The role of environmental dynamism and competition intensity. *Technovation*, 124, 102751.

Thorgren, S., Wincent, J., & Eriksson, J. (2011). Too small or too large to trust your partners in multipartner alliances? The role of effort in initiating generalized exchanges. *Scandinavian Journal of Management*, 27(1), 99-112.

Verganti, R., Vendraminelli, L., & Iansiti, M. (2020). Innovation and design in the age of artificial intelligence. *Journal of product innovation management*, *37*(3), 212-227.

Zeng, M., & Chen, X.P. (2003). Achieving Cooperation in Multiparty Alliances: A Social Dilemma Approach to Partnership Management. *Academy of Management Review*, 28(4), 587-605.