Call for Papers for a Special Issue

Strategy and Artificial Intelligence

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Background
Over the last decade, Artificial Intelligence (AI), and in particular Machine Learning (ML) or data-driven AI, has pervaded the functioning of many organizations around the world and affected the strategies they formulate. AI refers to any computer system that perceives its environment (e.g., numerical data, speech, text, and images), learns from past behavior, and takes action to maximize the likelihood of attaining its goals. Applications of these technologies have transformed data-driven decision making by organizations. Recently, generative AI and large-language models have garnered significant attention, challenging executives and boards to align them with their digital strategies. The emergence and application of AI technologies are set to revolutionize firm strategy and competition, sparking discussions across various forums, from board-level meetings to frontline staff exploring AI's potential to enhance customer experiences.

The adoption of AI and its impact on firm strategy, while pervasive, can be viewed through three lenses: how the technology shapes how firms *compete* (competing with others), *strategize* (formulating their strategies), and *organize* (organizing their operations).

Competing. AI plays a significant role in shaping how firms compete with one another, thus influencing the overall competitive landscape. It enables new business models and new avenues for value creation and capture that exploit the ever-increasing availability of data. However, as data becomes more widespread and less unique, achieving competitive advantage becomes more difficult. Furthermore, disruptive events, crises, shocks, and similar factors can pose significant challenges to AI relying on historical data, raising challenges for the effectiveness of using AI when competing under high uncertainty. Therefore, it is important to understand the role of AI in diverse environments characterized by varying levels of risk and uncertainty. At the same time, AI is responsible for dramatic changes in the competitive landscape, and its rapid diffusion in

business has given rise to a host of entrepreneurial opportunities, most notably by combining novel sources of data on customer needs, market trends, and technologies.

Strategizing. The effects of AI reach far beyond the content of strategy. AI augments strategizing by foraging information from external sources and identifying patterns in data otherwise undetectable to human strategists. By these functions, strategists are alerted to rapid changes in the firm's environment, such as new threats of a competitor radically innovating online services or opportunities to enter a market recovering from an economic downturn. Beyond such pattern identification, AI can be used to predict market developments, competitors' moves, and economic, social and cultural trends. Complementing an external focus, AI solutions are also upgrading internally oriented strategizing. AI automates resource analysis and allocation decisions across many areas of the firm, transforming how the firm executes strategies and conducts its business operations. In the executive suite, AI is currently evolving into an important "sparring partner" that helps top-management address looming risks, such as portfolio risks caused by strongly correlated fluctuations in demand across the firm's businesses.

Organizing. AI impacts how firms divide and integrate tasks, potentially resulting in different ways that firms organize at a macro-level. At a micro-level, these changes directly impact the workers in these firms. The utilization of AI in organizing activities presents both opportunities and challenges that firms need to address. It may lead to increased employee productivity and creativity. However, machine learning algorithms have been found to produce outcomes that can be systematically biased with regard to gender, ethnicity, and other factors. "Good governance" of AI may demand scrutiny of hidden prejudices by frequent testing of algorithms on simulated data, and careful examination of current applications of AI to pattern recognition, predictions, and automation. "Human in the loop decision-making" combines the common sense of strategists with the relatively opaque workings of AI, and may reduce such biases in AI applications.

Aim and Scope

We are calling for empirical studies applying quantitative or qualitative methods to examine AI, ML, in strategy, strategic decision-making, or data-driven decision-making. We welcome deductive, inductive, or abductive studies. Studies that are exclusively theoretical / conceptual are outside the scope of the special issue.

A study must align with at least one of the three core themes identified above. Within these themes, relevant questions to be addressed may include, but are not limited to, the following examples of research inquiries:

Competing

- How does AI affect value creation and value capture? What complementary assets are needed in order for firms to create and capture value from AI?

- How does AI change industry structures and business ecosystems?
- How does AI enable new business models?
- How does AI influence positioning and how firms differentiate themselves from competitors?
- What is the role of AI in formulating and supporting platform strategies? What is the role of AI in monitoring and shaping the emergence of ecosystems?

Strategizing

- How can AI support strategic decision-making?
- How can organizations build AI capabilities?
- How do strategies of AI and non-AI firms differ?
- How can AI support portfolio strategies? How can AI be applied in assessing and monitoring financial and strategic risks?
- What potential does AI hold for mergers and acquisition strategies? How can AI be used to identify and choose alliance partners?
- How can AI support strategic decision-making and -problem solving? Under what conditions may strategic decisions be delegated to AI? How to monitor and control AI strategic decision support? Under what conditions does AI strengthen or hamper TMT strategy making? What are potential and actual biases in strategic decision making, and how to mitigate them? What are effective forms of collaboration between strategists and AI?
- What are entrepreneurial strategies based on AI? How can AI be used to identify business opportunities and avert threats to new ventures?
- What specific types and forms of AI are relevant for strategic analysis? How can AI enable strategic analysis? How does AI support environmental screening? What algorithms can be used to stipulate competitive moves within industries and strategic groups?

Organizing

- How does AI enable new ways of organizing labor and tasks within organizations, by transforming the functions of monitoring, information sharing, coordination and collaboration?
- How does AI transform existing organizational hierarchy and allocation of formal authority? How does AI transform power relationships and real authority inside the organization? How does AI shape the functioning of teams?
- How do organizations address the challenges of AI transformation?
- How can artificial and human intelligence be combined (i.e., augmented intelligence) to create complementarity?
- How does AI impact corporate governance and the strategic functions of leaders including top management teams and boards? What are factors shaping top management's trust in AI? What are new strategic issues that leaders must decide on

behalf of the entire organization, such as privacy concerns, usage of data, and how to respond to legal, political and society challenges on those issues?

- What is the role of AI in strategic human resource management? What are the consequences of using AI to hire talent at all levels, including C-level managers and board members? How to attract and retain AI specialists for strategic activities in firms, and integrate them in strategy formulations and operations?
- How can organizations use generative AI to organize more effectively?

Authors' Conference

As part of the review process for the special issue, we plan an "Authors' Conference" hosted by the Center for the Future of Management (https://stern.nyu.edu/cfm) at New York University's Stern School of Business. Authors of papers that receive a first-round revise & resubmit will be invited to attend the conference and present their work.

Submission Process

Submitted papers must be in accordance with the requirements of the *Strategic Management Journal* (SMJ). The submission window opens on September 1, 2024. Original manuscripts are due by the submission deadline of September 30, 2024. They must be submitted using the SMJ Submission system at https://wiley.atyponrex.com/journal/SMJ. Authors should indicate that they would like the submission to be considered for the special issue "Strategy and Artificial Intelligence."

Further Information

Contact any of the guest editors or the advising editor.