

AI and its Impact on Corporate Decision-Making: The Ethics of AI and Algorithms in Management Decision-Making

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Abstract

The rapid integration of artificial intelligence (AI) into corporate decision-making processes has introduced unprecedented opportunities for efficiency, accuracy, and scalability, alongside profound ethical challenges. While AI-powered analytics can augment managerial judgment by mitigating cognitive biases and enabling data-driven insights, the "black-box" nature of many AI systems undermines transparency and accountability. This research proposes a mixed-methods study to investigate the dual impact of AI on corporate decision-making and the ethical governance frameworks necessary to ensure responsible deployment. The study will employ a sequential explanatory design, combining quantitative surveys of corporate managers with qualitative case studies of organisations that have deployed AI-driven decision systems. Drawing on bounded rationality theory and organisational justice theory, the research aims to develop a comprehensive framework for ethical AI integration in management decision-making. The findings will contribute to both academic literature and practical governance guidelines for corporate boards navigating the algorithmic era.

Keywords: *artificial intelligence; corporate decision-making; algorithmic management; AI ethics; governance; accountability; transparency; human-AI interaction*

1. Introduction

1.1 Background

Artificial intelligence has fundamentally reshaped the landscape of corporate decision-making. From credit approval and fraud detection to recruitment, performance evaluation, and strategic planning, AI systems increasingly influence or automate decisions that were once the exclusive domain of human managers. The global adoption of AI in business has accelerated dramatically, with generative AI and large language models introducing new capabilities for simulating human decision-making and supporting complex strategic choices.

This transformation brings significant promise. AI-augmented strategic decision-making has been shown to increase decision quality and operational efficiency. In sectors ranging from retail to supply chain management, AI-driven analytics has demonstrably improved demand forecasting, resource allocation, and customer insights. Yet, alongside

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these benefits, serious ethical concerns have emerged regarding algorithmic bias, opacity, accountability gaps, and the dehumanisation of management processes.

1.2 Problem Statement

Despite growing academic interest in AI for business, a significant gap persists between technological advancement and the ethical governance of AI-driven decision-making in corporate contexts. The literature reveals a "credibility paradox": while 92% of organisations use AI-generated insights, 74% of executives distrust them for critical decisions. This trust deficit stems from explanatory inadequacies — AI's inability to communicate causal reasoning, contextual framing, and narrative coherence.

Furthermore, existing governance frameworks are insufficient to address the unique challenges posed by algorithmic management. As boards are increasingly asked to approve AI systems that encode assumptions into millions of decisions, the standard of evidence required for informed approval has barely evolved. The opacity that was once merely a governance weakness has become, in the age of AI, a fiduciary failure.

1.3 Research Aim

This research aims to systematically investigate the impact of AI on corporate decision-making and to develop an empirically grounded ethical governance framework for the responsible deployment of AI and algorithms in management decision processes.

1.4 Research Objectives

- i. To examine how AI systems influence the quality, speed, and nature of corporate decision-making across strategic, tactical, and operational levels.
- ii. To identify and analyse the ethical challenges arising from AI and algorithmic decision-making in management contexts, including bias, transparency, accountability, and human dignity.
- iii. To investigate the role of human-AI interaction in shaping managerial judgment and decision outcomes.
- iv. To develop a comprehensive ethical governance framework for AI integration in corporate decision-making.
- v. To provide actionable recommendations for corporate boards, managers, and policymakers.

1.5 Significance of the Study

This research is timely and significant for several reasons. First, the regulatory landscape is rapidly evolving, with the EU Platform Work Directive and similar frameworks mandating human oversight and transparency in algorithmic management. Second, corporate boards face increasing pressure to govern AI responsibly, yet lack clear guidance on how to do so. Third, the academic literature, while rich in theoretical discussion, lacks empirical studies that bridge the gap between AI implementation and ethical governance in real organisational contexts.

2. Literature Review

2.1 Theoretical Foundations

Bounded Rationality and AI Augmentation. Herbert Simon's theory of bounded rationality posits that managers cannot allocate all required time, information, and mental capacity to evaluate every possible option before deciding. AI has been theorised as a mechanism to overcome these limitations by expanding information processing capacity and reducing cognitive biases. However, this augmentation is not without risks, including automation bias and overreliance on algorithmic outputs.

Organisational Justice Theory. The deployment of algorithmic management systems raises fundamental questions of distributive, procedural, and interactional justice. Research indicates that algorithmic autonomy systematically

undermines the core pillars of organisational justice, manifesting in workplace dehumanisation through hyper-surveillance and diminished employee autonomy. These justice concerns are central to the ethical evaluation of AI in management decision-making.

2.2 AI and Decision-Making Quality

Empirical evidence on AI's impact on decision quality is mixed. A study of Indonesian retail companies found that AI implementation had a significant and positive effect on managerial decision-making effectiveness, with an R^2 of 0.712. However, a blind test with 200 Chief Marketing Officers revealed that while AI matched or exceeded human report quality in 82% of cases, executives rejected 68% of algorithmically generated insights due to explanatory inadequacies.

The mediating role of human-AI interaction is critical. Research using PLS-SEM on 388 valid responses demonstrated that HR analytics adoption is positively associated with managerial decision-making style through human-AI interaction, but also revealed a significant negative moderating effect of positive attitudes toward AI, suggesting risks of overdependence and reduced critical verification.

2.3 Ethical Challenges in Algorithmic Management

Bias and Fairness. AI systems can amplify biases present in historical data, perpetuating social inequalities and discriminatory practices. A prominent example is the lawsuit against Meta, where 26 former employees alleged that AI-powered software disproportionately targeted workers with disabilities or those on medical leave during layoffs. The AI systems' emphasis on metrics like keystroke and token consumption discriminated against employees with reduced output due to protected reasons.

Transparency and Explainability. The opacity of AI algorithms raises concerns about fairness and accountability. Even to their developers, AI algorithms' opacity complicates matters, as current systems often lack moral or logical judgment, relying solely on predictive outputs derived from learned data patterns. This opacity weakens accountability because affected individuals may not know that AI influenced a decision.

Accountability and Governance. The integration of AI into corporate decision-making has created a new responsibility for directors, who must now manage automated systems instead of monitoring workers. The central governance question is not simply whether corporations articulate responsible AI principles, but whether these principles translate into operational controls, board-level accountability, and harm prevention.

2.4 Regulatory and Governance Frameworks

Emerging regulatory frameworks are increasingly mandating human oversight and transparency in algorithmic management. The EU Platform Work Directive requires collaboration between data protection authorities and labour authorities, and mandates information-sharing about algorithmic systems. The ILO recommends a robust collective data governance framework that institutionalises rights like prior consultation and participation on the adoption of workplace technologies.

At the organisational level, frameworks such as the AI Recruitment Governance Framework (ARGF) propose responsible AI governance architecture based on three core dimensions: transparency, accountability, and human oversight. The NIST AI Risk Management Framework offers voluntary guidance on managing AI risks throughout the lifecycle.

2.5 Research Gap

Despite this rich body of literature, several gaps remain. First, most studies focus on either the technical aspects of AI or the ethical principles, with few examining the integration of both in corporate decision-making contexts. Second, empirical evidence on how AI actually reshapes managerial judgment in real organisational settings is limited. Third, existing governance frameworks remain largely theoretical and lack validation through empirical research. This study addresses these gaps by adopting a mixed-methods approach that examines both the impact of AI on decision-making and the ethical frameworks necessary to govern it.

3. Theoretical Framework

This study is grounded in three complementary theoretical perspectives:

3.1 Bounded Rationality Theory (Simon, 1955)

Bounded rationality provides the foundational lens for understanding why organisations adopt AI for decision-making. The theory posits that human decision-makers operate under cognitive limitations, and AI offers a mechanism to expand information processing capacity and reduce biases. This study extends bounded rationality theory to account for socio-technical decision systems in which AI augments, rather than replaces, human judgment.

3.2 Organisational Justice Theory (Greenberg, 1987)

Organisational justice theory offers a normative framework for evaluating the ethical implications of algorithmic management. Distributive justice concerns the fairness of outcomes (e.g., who gets promoted or laid off), procedural justice concerns the fairness of processes (e.g., how decisions are made), and interactional justice concerns the dignity and respect with which decisions are communicated. Research demonstrates that algorithmic autonomy undermines all three dimensions.

3.3 The AI Decision Matrix (MIT Sloan, 2026)

The AI Decision Matrix provides a practical framework for determining when AI should be granted decision rights versus when human judgment should prevail. The matrix assesses decisions based on two dimensions: ambiguity and risk. Routine, low-ambiguity, low-risk decisions are suitable for AI autonomy, while high-ambiguity, high-risk decisions require human oversight.

3.4 Integrated Conceptual Framework

These three theories are integrated into a conceptual framework that posits:

- AI adoption is driven by the need to overcome bounded rationality
- The ethical impact of AI must be evaluated against organisational justice principles
- The appropriate allocation of decision rights between humans and AI depends on decision characteristics (ambiguity and risk)
- Human-AI interaction mediates the relationship between AI adoption and decision quality

4. Research Questions

4.1 Primary Research Question

How does the integration of AI and algorithms into corporate decision-making processes impact decision quality and ethical outcomes, and what governance frameworks are necessary to ensure responsible deployment?

4.2 Secondary Research Questions

- i. How does AI adoption influence managerial decision-making styles across strategic, tactical, and operational levels?
- ii. What are the perceived ethical challenges associated with AI-driven decision-making in management?
- iii. What role does human-AI interaction play in mediating the relationship between AI adoption and decision outcomes?
- iv. How do corporate boards and senior managers currently govern AI systems, and what gaps exist in existing governance frameworks?
- v. What conditions determine the appropriate allocation of decision rights between human managers and AI systems?

5.1 Integration of Findings

The quantitative and qualitative findings will be integrated through a connected approach. Quantitative findings will inform the selection of cases and the development of interview protocols. Qualitative findings will explain, contextualise, and expand upon the quantitative results. A joint display matrix will be used to visually represent the integration of both data sets.

5.2 Validity and Reliability

Quantitative: Content validity will be established through expert review. Construct validity will be assessed through confirmatory factor analysis. Reliability will be measured using Cronbach's alpha (≥ 0.70) and composite reliability (≥ 0.70).

Qualitative: Credibility will be enhanced through triangulation (multiple data sources), member checking, and peer debriefing. Transferability will be supported through thick description of cases. Dependability will be ensured through an audit trail.

6. Ethical Considerations

This research will adhere to the highest ethical standards:

- i. Informed Consent: All participants will receive detailed information about the study's purpose, procedures, risks, and benefits before providing voluntary consent.
- ii. Confidentiality and Anonymity: All data will be anonymised and stored securely. Organisational identities will be masked in publications.
- iii. Minimisation of Harm: The study poses minimal risk to participants. However, given the sensitivity of discussing AI-related job displacement and ethical failures, interviews will be conducted with sensitivity and participants will have the right to withdraw at any time.
- iv. Data Protection: All data handling will comply with applicable data protection regulations, including GDPR where applicable.

- v. Researcher Positionality: The researchers will maintain reflexivity throughout the study, acknowledging their own assumptions and biases regarding AI and corporate governance.
- vi. Ethical Approval: The study will obtain ethical approval from the relevant institutional review board before commencement.

7. Expected Outcomes and Contributions

7.1 Academic Contributions

- Empirical evidence on the relationship between AI adoption and decision quality in corporate contexts
- A validated theoretical model integrating bounded rationality, organisational justice, and the AI Decision Matrix
- Rich qualitative insights into the mechanisms through which AI reshapes managerial judgment
- A comprehensive ethical governance framework for AI in management decision-making

7.2 Practical Contributions

- Actionable guidelines for corporate boards on governing AI systems
- Recommendations for managers on balancing AI capabilities with human judgment
- Policy insights for regulators on algorithmic accountability and transparency
- Training and development frameworks for building AI-literate leadership

7.3 Dissemination Plan

- Publication in peer-reviewed journals (e.g., Journal of Business Ethics, Strategic Management Journal, AI & Society)
- Presentation at international conferences (e.g., Academy of Management, International Conference on Information Systems)
- Executive summary report for corporate practitioners
- Policy brief for regulatory bodies

8. Limitations

- i. Generalisability: Findings from case studies may not be generalisable to all organisational contexts, though the quantitative component enhances external validity.
- ii. Self-Report Bias: Survey responses may be influenced by social desirability and self-report bias.
- iii. Access to Sensitive Data: Some organisations may be reluctant to share information about AI failures or ethical breaches.
- iv. Rapid Technological Change: The AI landscape evolves rapidly, and findings may require periodic updating.
- v. Cross-Cultural Variation: The study may not fully capture cultural differences in AI adoption and ethical expectations across regions.

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