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An Empirical Study on Artificial Intelligence (AI) in Ethics and Sustainable Competitive Advantage: The Managerial Imperative

Article History:

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How to cite this article: Gulyani M, *et al.* An Empirical Study on Artificial Intelligence (AI) in Ethics and Sustainable Competitive Advantage: The Managerial Imperative. *J Int Commer Law Technol.* 2025;6(1):962–968

Received: 03-10-2025

Revised: 17-10-2025

Accepted: 02-11-2025

Published: 19-11-2025

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Abstract: Contemporary organizations face mounting pressure to integrate artificial intelligence while navigating increasingly complex ethical landscapes characterized by regulatory proliferation, heightened consumer scrutiny, and intensifying competition for technical talent. This research examines how ethical AI frameworks transform from mere compliance obligations into strategic assets that generate sustainable competitive advantages across multiple organizational dimensions. Through systematic analysis of regulatory developments, market dynamics, operational imperatives, and organizational culture factors spanning 2023-2024, this study reveals that ethical AI practices create measurable business value through four interconnected mechanisms: regulatory risk mitigation, consumer trust enhancement, operational excellence, and talent acquisition. Drawing on resource-based view and stakeholder theory, the research demonstrates that organizations treating AI ethics as a strategic priority rather than a constraint achieve superior market positioning, enhanced brand equity, improved innovation capacity, and stronger human capital foundations. Empirical evidence indicates that proactive ethical frameworks enable organizations to avoid regulatory penalties reaching up to seven percent of global turnover, capture premium pricing opportunities with 68 percent of consumers preferring transparent AI practices, achieve up to 50 percent higher return on investment from AI initiatives, and reduce employee turnover with 65 percent of workers favoring responsible employers. These advantages compound over time, creating governance moats, trust-based differentiation, operational efficiency gains, and cultural capabilities that competitors struggle to replicate. This research contributes to management literature by establishing AI ethics as a core component of strategic resource management rather than a peripheral compliance function. It challenges prevailing assumptions that ethics constrains competitiveness, instead revealing that ethical commitments enable superior long-term performance. The study offers practical frameworks for executives seeking to leverage ethical practices for competitive differentiation in AI-intensive markets, providing actionable guidance on governance structures, operational implementation, stakeholder communication, and culture development that translate ethical principles into business outcomes.

Keywords: Artificial Intelligence Ethics, Competitive Advantage, Strategic Management, Corporate Governance, Digital Trust, Innovation Management, Regulatory Compliance, Organizational Culture.

INTRODUCTION

The proliferation of artificial intelligence technologies across industries has fundamentally altered competitive dynamics in global markets. Organizations deploying AI systems encounter unprecedented opportunities for efficiency gains, personalized customer experiences, and innovative product development. However, this technological revolution simultaneously introduces substantial ethical challenges relating to algorithmic bias, data privacy, transparency, and accountability (Dignum, 2019; Mittelstadt et al., 2016). The critical question confronting contemporary managers is not whether to adopt AI technologies, but how to implement them in ways that generate lasting competitive advantages while managing associated ethical risks.

Traditional perspectives on AI ethics have predominantly focused on compliance requirements and risk avoidance strategies (Floridi et al., 2018). This defensive posture, while necessary, fails to capture the strategic value that ethical AI frameworks can deliver. Recent developments in regulatory landscapes, consumer expectations, and talent markets suggest that AI ethics has evolved from a peripheral concern into a central determinant of organizational success (Bartneck et al., 2021). Companies that recognize and capitalize on this shift position themselves advantageously relative to competitors who view ethics merely as a constraint on innovation.

This research addresses a critical gap in management literature by examining AI ethics through the lens of sustainable competitive advantage theory. While substantial academic work explores technical aspects of AI fairness and accountability (Barocas & Selbst, 2016; Kleinberg et al., 2018), limited research investigates how ethical AI practices translate into measurable business outcomes and strategic positioning. This study analyzes empirical evidence from regulatory environments, consumer behavior patterns, operational performance metrics, and talent acquisition data to establish relationships between ethical AI implementation and competitive advantage generation.

Literature Review

Theoretical Foundations of Competitive Advantage

Strategic management literature has examined sources of sustainable competitive advantage through the resource-based view, which posits that advantages derive from valuable, rare, inimitable, and non-substitutable resources (Barney, 1991; Peteraf, 1993). Within this framework, AI ethics can be conceptualized as both a valuable resource and a dynamic capability that enables organizations to navigate evolving technological and regulatory landscapes (Teece et al., 1997). Stakeholder theory provides complementary insights, arguing that firms creating value for multiple stakeholder groups

achieve superior long-term performance (Freeman, 1984; Jones, 1995).

AI Ethics: From Philosophy to Practice

The academic discourse on AI ethics has evolved rapidly from abstract philosophical debates toward practical frameworks for responsible AI development. Key ethical principles include fairness, accountability, transparency, privacy, and safety (Jobin et al., 2019; Morley et al., 2020). Recent research examines organizational dimensions of AI ethics implementation, documenting challenges including lack of clear accountability structures, insufficient technical expertise, and tensions between ethics requirements and commercial pressures (McNamara et al., 2018; Raji et al., 2020).

Regulatory Evolution and Compliance Imperatives

The regulatory landscape for AI has transformed dramatically, with the EU AI Act representing comprehensive frameworks establishing risk-based requirements with substantial penalties (European Commission, 2024). Legal scholarship examines liability questions arising from AI system failures and intellectual property issues related to AI-generated content (Lior, 2020; Abbott, 2020). Simultaneously, marketing research demonstrates that trust plays increasingly critical roles in technology adoption decisions, with consumer concerns about AI creating opportunities for organizations that effectively communicate their ethical practices (Gillespie, 2014; Liao et al., 2023).

Methodology Adopted

This study employs a multi-method approach combining secondary data analysis with theoretical framework development. The research integrates quantitative evidence from industry surveys, regulatory documents, and market studies with qualitative insights from organizational case examples. The temporal scope focuses on developments from 2023 through 2024, a period characterized by rapid regulatory evolution and maturation of AI ethics frameworks within organizations.

Primary data sources include published survey research from major consulting firms, academic institutions, and industry associations, providing quantitative evidence on consumer attitudes, organizational practices, and business outcomes. Regulatory documents including legislation, enforcement actions, and agency guidance materials offer insights into compliance requirements and penalties. The analysis organizes evidence around four key dimensions: regulatory and risk management imperatives, market and consumer trust imperatives, operational and innovation imperatives, and talent and culture imperatives.

Empirical Results and Analysis

The Regulatory and Risk Management Imperative

Table 1: The Regulatory & Risk Management Imperative

Trend	Supporting Data & Evidence	Link to Sustainable Competitive Advantage
Proliferation of Binding AI Regulation	•EU AI Act (March 2024): Fines of up to €35 million or 7% of global turnover for non-compliance •US AI Executive Order (Oct 2023): Mandates safety standards, privacy protections, and equity advances for powerful AI systems •China's AI Regulations: Focused on generative AI and algorithmic transparency, with strict enforcement	Proactive compliance becomes a moat. Companies with embedded ethical frameworks avoid massive fines, project delays, and market access bans, ensuring operational continuity and lower risk profiles
Rising Litigation and Reputational Costs	•CNIL (France): €5.2M fine against a company for unlawful data collection used in AI training (2023) •Getty Images vs. AI: Ongoing lawsuit over copyright infringement for training data •Surge in AI-related IPOs and M&A scrutiny regarding AI model provenance	Robust governance as a shield. A documented, ethical approach to data sourcing, model training, and output verification reduces legal exposure and protects brand reputation, a valuable intangible asset

Recent regulatory developments have transformed AI ethics from voluntary best practices into legally binding requirements with substantial enforcement mechanisms. The European Union's AI Act, finalized in March 2024, establishes a comprehensive risk-based framework with penalties reaching 35 million euros or seven percent of global annual turnover for serious violations. United States regulatory approaches demonstrate similar trajectories toward increased oversight through executive orders and agency guidelines. Asian regulatory frameworks demonstrate particular focus on generative AI and algorithmic transparency with strict enforcement.

Litigation data reinforces regulatory trends, demonstrating substantial financial and reputational risks from AI failures. The French data protection authority imposed a 5.2 million euro fine for unlawful data collection used in AI training during 2023. Ongoing intellectual property litigation threatens potentially massive liability exposure. Organizations with proactive ethical AI frameworks achieve competitive advantages through superior risk management, avoiding regulatory fines, maintaining market access across jurisdictions, and experiencing fewer project delays from regulatory interventions.

4.2 The Market and Consumer Trust Imperative

Table 2: The Market & Consumer Trust Imperative

Trend	Supporting Data & Evidence	Link to Sustainable Competitive Advantage
Consumer Skepticism and Demand for Transparency	•IBM Study (2024): 64% of consumers are skeptical of AI-driven company recommendations, but 68% are more likely to trust a company that is transparent about its AI use •Edelman Trust Barometer (2024): "Trust" is a primary factor in consumer choice, with technology being a key area of concern	Trust as a differentiator. In a market of AI-powered sameness, transparent and ethical AI practices build deep brand loyalty, reduce customer churn, and allow for premium pricing based on trust
The "Ethical Brand" Premium	•Salesforce Survey (2023): 92% of business buyers are more likely to purchase from a company that documents and shares its ethical AI practices •MIT Sloan Management Review: Companies perceived as ethical innovators attract more loyal customers and partners	Ethical sourcing for AI. Just as "fair trade" products command a premium, "responsibly built AI" becomes a key purchasing criterion for B2B and B2C customers

Consumer attitudes toward AI reveal significant skepticism alongside recognition of potential benefits. IBM research from 2024 found that 64 percent of consumers express skepticism toward AI-driven company recommendations, yet 68 percent indicate greater willingness to trust companies demonstrating transparency about AI usage. The Edelman Trust Barometer for 2024 reinforces the critical importance of

trust in consumer decision-making, with technology identified as a key area of concern.

Business-to-business contexts demonstrate even stronger preferences for ethical AI practices. Salesforce survey research from 2023 indicates that 92 percent of business buyers report higher likelihood of purchasing from companies that document and share their ethical AI practices. MIT Sloan Management Review research documents that companies perceived as ethical innovators attract more loyal customers and partners. These market dynamics create multiple mechanisms through which ethical AI generates competitive advantages, including deeper brand loyalty, premium pricing opportunities, expanded market share, and strengthened partnership opportunities.

4.3 The Operational and Innovation Imperative

Table 3: The Operational & Innovation Imperative

Trend	Supporting Data & Evidence	Link to Sustainable Competitive Advantage
"Garbage In, Garbage Out" at Scale	•McKinsey Survey (2023): Organizations that actively manage their AI data and model risks report up to 50% higher ROI from their AI initiatives •MIT Research: Biased AI models in HR can lead to poor hiring decisions, reducing workforce quality and increasing turnover costs	Quality and efficiency. Ethical AI necessitates robust data governance, leading to cleaner data, more reliable models, and fewer costly errors or "model drifts," directly improving operational efficiency and output quality
Unlocking Innovation through Responsible AI	•Accenture Study: 79% of executives believe that responsible AI is critical to scaling AI innovation successfully •World Economic Forum: Frameworks for "Responsible AI" are being used to explore new, sensitive markets (e.g., healthcare, finance) that were previously too risky	License to innovate. A strong ethical framework provides the guardrails needed for companies to confidently explore high-value, high-risk applications (e.g., drug discovery, autonomous systems), opening new revenue streams

The operational performance of AI systems depends fundamentally on data quality and model governance.

McKinsey survey research from 2023 reveals that organizations actively managing AI data and model risks report up to 50 percent higher return on investment from AI initiatives compared to organizations with weaker governance. MIT research demonstrates specific mechanisms through which unethical AI practices harm operational performance, including biased AI models in human resources contexts producing poor hiring decisions that reduce workforce quality and increase turnover costs.

Ethical AI frameworks drive operational excellence by necessitating robust data governance practices. Organizations implementing comprehensive ethical reviews develop cleaner datasets, more reliable models, and better monitoring systems. Innovation capacity represents another critical dimension where ethical AI practices generate competitive advantages. Accenture research indicates that 79 percent of executives consider responsible AI critical to scaling AI innovation successfully. The World Economic Forum documents how responsible AI frameworks enable exploration of previously inaccessible markets in healthcare, financial services, and autonomous systems.

4.4 The Talent and Culture Imperative

Table 4: The Talent & Culture Imperative

Trend	Supporting Data & Evidence	Link to Sustainable Competitive Advantage
The War for AI Talent	•MIT/Deloitte Research: Top AI engineers and data scientists increasingly prefer to work for companies with strong ethical principles, viewing it as a sign of a forward-thinking and stable culture •PwC Survey (2024): 65% of employees are more likely to stay with a company that uses AI responsibly	Attracting and retaining top talent. A strong AI ethics posture is a powerful employer branding tool, reducing recruitment costs and building a more innovative, engaged, and stable workforce
Mitigating "Algorithmic Aversion"	•Harvard Business School Research: Employees are less likely to trust and use AI tools they perceive as "black boxes" or unfair, leading to failed AI implementations	Higher adoption rates. Transparent and explainable AI builds internal trust, leading to faster and more complete adoption of AI tools, which is essential for realizing their

Trend	Supporting Data & Evidence	Link to Sustainable Competitive Advantage
		promised ROI

Competition for AI talent has intensified dramatically as organizations rush to build technical capabilities. MIT and Deloitte research reveals that top AI engineers and data scientists increasingly prioritize employers with strong ethical principles, viewing ethical commitments as indicators of forward-thinking and stable organizational cultures. PwC survey research from 2024 found that 65 percent of employees report greater likelihood of remaining with companies that use AI responsibly.

Beyond recruitment and retention, ethical AI practices affect workforce productivity and innovation capacity. Harvard Business School research documents "algorithmic aversion" whereby employees distrust and resist using AI tools they perceive as unfair or opaque. Transparent, explainable AI systems that employees understand and trust achieve higher adoption rates and generate greater value. Empirical evidence demonstrates that ethical AI practices generate competitive advantages through stronger employer brands, lower turnover rates, higher AI adoption rates, and innovative cultures that generate superior problem-solving capabilities.

Discussion and Implications

AI Ethics as Strategic Resource

The empirical evidence demonstrates that AI ethics functions as a strategic resource generating sustainable competitive advantages across multiple dimensions. Applying resource-based view criteria, ethical AI capabilities prove valuable through measurable improvements in regulatory compliance, market positioning, operational performance, and talent acquisition (Barney, 1991). They demonstrate rarity as most organizations continue treating ethics as compliance obligations rather than strategic assets. They exhibit inimitability as ethical cultures and governance capabilities require substantial time and organizational change efforts to develop.

This characterization of AI ethics as strategic resource challenges prevailing managerial assumptions that ethics and competitiveness exist in tension. The evidence reveals that organizations treating ethics as constraints on innovation actually undermine their competitive positions through elevated risks, reduced consumer trust, inferior operational performance, and talent disadvantages. The dynamic capabilities perspective offers additional insights, as ethical AI frameworks represent organizational processes that enable adaptation to rapidly evolving technological and regulatory environments (Teece et al., 1997).

Managerial Implications

Executives should reconceptualize AI ethics from

peripheral compliance function to core strategic priority. This requires elevating AI ethics governance to senior leadership levels with clear accountability and adequate resources. Strategic planning processes must integrate AI ethics considerations from inception rather than treating them as afterthoughts. Investment in AI ethics capabilities should receive priority similar to other strategic capabilities through hiring, training, technical tools, and external partnerships.

Translating strategic commitment into operational reality requires systematic approaches to responsible AI development. Organizations should adopt AI ethics frameworks operationalized through concrete requirements including data quality standards, model documentation practices, bias testing protocols, and ongoing monitoring procedures. Data governance represents a critical operational priority, with processes ensuring training data quality, representativeness, and legal compliance.

Realizing market advantages from ethical AI requires effective communication with external stakeholders. Organizations should develop clear, accessible explanations of AI systems including purposes, capabilities, limitations, and safeguards. Transparency initiatives build trust while differentiating organizations from competitors. Internal communication proves equally important for cultural development, with clear articulation of ethical expectations and training on responsible AI practices.

Attracting and retaining top AI talent requires visible commitment to ethical practices. Recruitment materials should prominently feature ethical AI initiatives and organizational values. Building ethical culture requires sustained leadership attention, with senior leaders modeling ethical behavior and prioritizing responsibility over short-term performance pressures. Organizations should invest in ongoing ethics education for technical staff, managers, and executives.

Limitations and Future Research

This research faces several limitations including reliance on secondary data sources, cross-sectional analysis limiting causal inference, and potential social desirability bias in self-reported survey data. The focus on large organizations may limit generalizability to small and medium enterprises. Future research opportunities include longitudinal studies tracking organizations over extended periods to enable stronger causal inference, firm-level quantitative research examining correlations between ethical AI practices and financial performance, qualitative case studies providing richer understanding of implementation processes, and comparative international research examining how different regulatory and cultural contexts shape relationships between ethical AI and competitive advantage

Conclusion

This research establishes that AI ethics functions as a strategic imperative generating sustainable competitive advantages rather than merely representing compliance

obligations. The empirical evidence demonstrates measurable business value from ethical AI practices across regulatory risk management, market positioning and consumer trust, operational excellence and innovation capacity, and talent acquisition and organizational culture. These findings challenge prevailing assumptions that ethics constrains competitiveness, instead revealing that ethical commitments enable superior performance.

The competitive advantages from ethical AI manifest through multiple mechanisms including avoiding regulatory fines, building consumer trust, achieving superior operational performance, unlocking innovation opportunities, and attracting top talent. From theoretical perspectives, the research contributes to strategic management literature by demonstrating how intangible assets and organizational capabilities generate value in rapidly evolving technological environments. For managers, the research provides clear imperative for treating AI ethics as strategic priority through senior-level governance, integration into strategic planning, systematic operational practices, transparent stakeholder communication, and ethical culture building.

As artificial intelligence technologies continue advancing and pervading organizational operations, the importance of ethical frameworks will intensify. Organizations building strong ethical capabilities now position themselves for leadership in the AI era. The managerial imperative is urgent—competitive advantage in coming decades will increasingly flow to organizations that successfully integrate technological innovation with ethical responsibility.

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