Ethics of Using Data in Automated Decision-Making

(Comparative Perspectives on Transparency, Fairness, and Institutional Accountability in the Age of AI)

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Abstract

This paper examines the ethical dimensions of data use in automated decision-making (ADM) systems and their implications for transparency, fairness, privacy, and accountability. As artificial intelligence (AI) and machine-learning technologies become increasingly integrated into governance and organizational decision processes, the boundaries between human and algorithmic agency are being redefined. The study seeks to analyze how ethical principles can be operationalized to ensure that data-driven automation supports, rather than undermines, human-centered governance.

Employing a qualitative, comparative, and interpretive methodology, the research synthesizes theoretical insights from authors such as Floridi (2021), Nissenbaum (2020), Vallor (2022), Eubanks (2018), and Crawford (2021) with institutional frameworks including the OECD Principles on AI (2025), UNESCO Recommendation

on AI Ethics (2023), and the European Commission's AI Act (2025). Empirical and policy analysis demonstrates that while global ethical standards converge around transparency, fairness, and accountability, their implementation remains uneven—particularly in transitional economies such as those of the Western Balkans.

The findings reveal that the ethical sustainability of ADM depends not only on legal and technical safeguards but also on institutional culture, moral responsibility, and cross-sectoral collaboration. Embedding ethics in automated decision systems enhances public trust, regulatory compliance, and long-term economic stability. The paper concludes that ethical governance should be treated as a structural component of digital transformation, ensuring that innovation and responsibility evolve in tandem.

Keywords: *ethics, artificial intelligence, data governance, automated decision-making, transparency, fairness, accountability, privacy, governance.*

Introduction

Context and Problem Statement

The last decade has witnessed an unprecedented diffusion of artificial intelligence (AI) and data-driven technologies into virtually all domains of human and institutional activity. Automated decision-making (ADM) systems - powered by big data analytics, machine learning, and algorithmic modeling - are increasingly determining access to credit, employment, healthcare, and public services. According to OECD (2025), more than 70 percent of strategic decisions in the public and private sectors are now either partially or fully automated. This rapid technological shift has transformed not only the efficiency and precision of decisions but also the ethical foundations of governance.

What distinguishes ADM from previous technological innovations is its ability to *replace* rather than merely *support* human judgment. The transfer of decision-making authority from humans to algorithms has raised profound ethical questions concerning fairness, transparency, discrimination, and accountability. As Eubanks (2018) argues, algorithms often reproduce and amplify existing social inequalities; as Nissenbaum (2020) warns, they risk violating contextual integrity and privacy; and as Floridi (2021) emphasizes, they redefine the ontological boundaries between human agency and informational systems. These dilemmas are not abstract philosophical puzzles but pressing institutional and socio-economic challenges.

Rationale and Research Gap

Despite the proliferation of international ethical frameworks - including the OECD (2025) *Principles on AI*, the UNESCO (2024) *Recommendation on AI Ethics*, and the European Commission's *AI Act* (2025) - a critical gap remains between the normative articulation of ethics and its practical enforcement. Many institutions lack the capacity, expertise, or political will to translate ethical principles into operational standards. In transitional economies, such as Albania and its Western Balkan peers, the challenge is particularly acute: governments are adopting EU-aligned frameworks but often without the institutional infrastructure necessary to monitor algorithmic governance (RCC, 2024; MII, 2024).

This gap has significant implications for both governance and economic policy. In the absence of ethical safeguards, automated systems can undermine trust in public institutions, distort market outcomes, and erode citizens' rights. Conversely, the institutionalization of ethical principles - transparency, fairness, and accountability - can generate competitive advantages by enhancing legitimacy and compliance with global governance standards (World Economic Forum, 2024; World Bank, 2024). The present study therefore situates the ethics of ADM within a dual framework: as a question of *moral philosophy* and as a *determinant of economic and institutional performance.*

Purpose, Objectives, and Scope

The overarching purpose of this study is to investigate how ethical principles are conceptualized, operationalized, and governed in the context of automated decision-making. The research aims to bridge the gap between theory and practice through a comparative analysis of global, European, and regional frameworks. Specifically, it seeks to:

1. Critically analyze theoretical perspectives on data ethics and AI governance, drawing from contemporary philosophy and social science;
2. Identify ethical risks and dilemmas in the use of data for automated decisions, focusing on bias, opacity, and accountability gaps;
3. Examine institutional and legal approaches at global (OECD, UNESCO, WEF), regional (EU), and national (Albania, Western Balkans) levels;
4. Propose governance-oriented recommendations for embedding ethical safeguards within organizational decision-making processes.

Research Questions and Hypotheses

This investigation is guided by three primary research questions:

- What are the principal ethical challenges associated with the use of data in ADM systems?
- How do international and regional frameworks operationalize ethical principles in AI governance?
- What governance mechanisms are necessary to ensure transparency, fairness, and accountability in transitional economies?

Based on these questions, the study advances the following hypotheses:

1. The absence of institutionalized ethical mechanisms in ADM reproduces existing biases and undermines public trust.
2. Legal frameworks such as the EU *AI Act* (2025) and OECD (2025) *AI Principles* improve governance outcomes when coupled with accountability structures and capacity building.
3. The harmonization of ethical standards between global and regional frameworks enhances both technological adoption and socio-economic resilience.

Significance and Contribution

The contribution of this study is twofold. First, it develops a theoretical synthesis that connects information ethics, data governance, and institutional accountability. Second, it applies this framework empirically to assess how ethical standards are implemented across global and regional contexts, particularly in the Western Balkans. For *Economicus Journal* readers - scholars and policymakers in economics and governance - the paper provides both analytical insights and practical recommendations for aligning technological innovation with responsible governance.

By treating ethics not as a constraint but as a *structural component* of institutional performance, the study positions ethical AI governance as a catalyst for sustainable development, market integrity, and democratic legitimacy.

Literature Review

Conceptual Background

The increasing reliance on data-driven technologies and automated decision-making (ADM) systems has fundamentally altered the relationship between ethics, governance, and technology. As artificial intelligence (AI) becomes embedded in decision processes that once relied solely on human judgment, new questions emerge about responsibility, transparency, and moral agency. Scholars and policymakers increasingly recognize that these technologies are not value-neutral tools but social systems shaped by political, economic, and moral assumptions (Floridi, 2021; Eubanks, 2018; Crawford, 2021).

In this context, the ethics of data use in ADM has evolved as an interdisciplinary field encompassing philosophical inquiry, information ethics, and institutional governance. The central tension lies in reconciling the pursuit of efficiency and predictive accuracy with the preservation of fairness, accountability, and human dignity. While the technical community has made progress in designing algorithms for explainability and bias detection, philosophers and ethicists emphasize that the moral implications of automated systems cannot be solved through code alone (Vallor, 2022; Coeckelbergh, 2023). The following sections examine the main theoretical and institutional contributions that define the contemporary debate.

Philosophical Approaches to Data Ethics

The philosophical foundations of data ethics have been profoundly influenced by Luciano Floridi's (2021) theory of *information ethics*, which situates moral responsibility within the broader "infosphere." According to Floridi, digital environments create a new form of social ontology in which every entity - human, machine, or dataset - participates as an informational agent. Ethical decision-making, therefore, must extend beyond individual human action to include the relational and systemic effects of information processes. Floridi's framework establishes that data are not inert representations but active participants in moral networks; they can promote or harm well-being depending on how they are collected, processed, and used.

Helen Nissenbaum (2020) complements this perspective through her concept of *contextual integrity*, which redefines privacy as the maintenance of appropriate information flows within specific social contexts. In the age of ADM, this principle becomes crucial: algorithms often aggregate data from multiple domains - social media, financial records, medical histories - violating contextual norms of consent

and purpose. Nissenbaum argues that ethical governance requires respecting the social meaning of data rather than relying solely on procedural compliance with privacy laws.

Shannon Vallor (2022) extends the discussion by introducing the idea of *technomoral virtues*. Her virtue-ethical approach calls for the cultivation of moral character among developers, policymakers, and institutions responsible for AI systems. Ethical governance, in this view, depends not only on formal rules but on moral dispositions such as honesty, humility, and justice. Similarly, Mark Coeckelbergh (2023) argues that ethics in AI must be understood relationally: rather than asking what algorithms should do, we must ask how they reshape the moral relationships between humans and machines. Together, these authors shift the ethical debate from the micro level of individual behavior to the macro level of socio-technical systems.

Collectively, these philosophical frameworks form the normative foundation for evaluating ADM. They converge on three key principles: (1) ethics must extend beyond human actors to include digital and institutional agents; (2) privacy and fairness are context-dependent rather than universal absolutes; and (3) moral education and relational accountability are essential for sustainable governance of data technologies.

Algorithmic Bias, Discrimination, and Inequality

A major strand in contemporary literature focuses on the ethical risks inherent in algorithmic systems - particularly bias, discrimination, and the reproduction of inequality. Virginia Eubanks (2018), in *Automating Inequality*, demonstrates that the use of data in welfare, healthcare, and public administration often exacerbates existing social divisions. She shows that automated eligibility systems tend to penalize low-income citizens and minorities by codifying historical prejudices into algorithms. The ethical problem, Eubanks argues, is not the presence of technology itself but the uncritical trust placed in data-driven processes that reflect structural injustice.

Kate Crawford (2021), in *Atlas of AI*, extends this critique by portraying AI as an extractive infrastructure built upon human labor, environmental exploitation, and political asymmetry. Her work reveals how algorithmic systems, while marketed as objective, are entangled in global networks of power and inequality. Crawford introduces the concept of *data colonialism*, warning that the uncontrolled extraction of personal and behavioral data from individuals and communities mirrors historical forms of resource exploitation.

These critical analyses converge on an important insight: algorithmic governance, when left unchecked, risks transforming citizens into data subjects without agency. As Mittelstadt, Russell, and Wachter (2023) emphasize, bias is

not a technical anomaly but an inherent feature of systems trained on historically skewed datasets. The ethical response, therefore, must include both technical interventions (e.g., bias detection, data diversification) and institutional reforms (e.g., oversight boards, transparency mandates).

This literature collectively challenges the technocratic assumption that efficiency is morally neutral. Instead, it reframes ADM as a social practice that can either reinforce or dismantle systemic inequality depending on its ethical design and governance context.

Institutionalization of Ethical AI: Global Frameworks

OECD Principles on AI

The OECD Principles on Artificial Intelligence (2025) constitute one of the earliest and most influential institutional efforts to formalize ethical standards for AI governance. The framework outlines five foundational values: (1) inclusive growth and well-being; (2) human-centered values and fairness; (3) transparency and explainability; (4) robustness, security, and safety; and (5) accountability. These principles, endorsed by over forty countries, have become the normative baseline for subsequent frameworks such as those of UNESCO (2023) and the European Commission (2025).

The OECD (2025) also underscores the economic dimension of ethics, arguing that trust in AI is a prerequisite for sustainable innovation. From a governance standpoint, it promotes "responsible stewardship" of trustworthy AI - an idea that aligns closely with Floridi's (2021) conception of informational responsibility. However, empirical findings from the OECD AI Policy Observatory suggest a gap between normative commitment and practical implementation: many member states endorse the principles rhetorically but lack enforcement mechanisms such as independent auditing or ethical certification processes.

UNESCO Recommendation on the Ethics of Artificial Intelligence

The UNESCO Recommendation on the Ethics of Artificial Intelligence (2023) expands the OECD's normative framework by integrating human rights, cultural diversity, and environmental sustainability into the ethical governance of AI. It calls for AI systems that promote peace, justice, and equity, recognizing that ethical failures in technology often reflect deeper social inequities. The Recommendation introduces practical tools such as *Ethical Impact Assessments* and national AI observatories to monitor compliance.

UNESCO's approach reflects Nissenbaum's (2020) insight that ethics must be contextual: ethical governance cannot rely on universal codes detached from local cultural and institutional realities. The organization also stresses the inclusion of developing economies in global AI policy dialogues, arguing that ethical

governance must be equitable across nations and not merely within technologically advanced regions.

The European Union's AI Act

The European Commission's AI Act (2025) represents the most ambitious attempt to translate ethical principles into binding legislation. It introduces a risk-based classification of AI systems and imposes strict requirements for transparency, documentation, and human oversight in high-risk applications. The Act operationalizes several philosophical principles from Floridi (2021) and Vallor (2022), particularly the emphasis on accountability and human-centered design.

By enforcing the *human-in-the-loop* requirement, the AI Act institutionalizes what Vallor calls *technomoral responsibility*: ensuring that human values remain integral to automated processes. However, scholars have noted the challenges of implementation, particularly in balancing innovation with compliance burdens. The EU's regulatory approach contrasts with the more flexible frameworks of other regions but sets an important precedent for integrating ethics into law.

Complementary Frameworks: NIST and WEF

The NIST AI Risk Management Framework (2024) provides a technical complement to ethical regulation, offering standardized tools for identifying, measuring, and mitigating AI risks. While primarily focused on risk management, it implicitly embeds ethical values such as accountability and transparency within its procedures. Similarly, the World Economic Forum (2023) emphasizes the corporate governance dimension of AI ethics, advocating for the creation of AI ethics boards and algorithmic impact assessments in both public and private organizations.

Together, these frameworks mark a shift from theoretical ethics toward *institutional ethics*: the embedding of moral principles within organizational structures, regulations, and technical standards.

Thematic Synthesis of Ethical Principles

Across both philosophical and institutional literature, four recurring ethical principles emerge: transparency, fairness, privacy, and accountability. These values form the moral and governance pillars of ethical ADM.

- Transparency involves both algorithmic explainability and institutional openness. As Floridi (2021) and Mittelstadt et al. (2023) argue, transparency is necessary to ensure public trust and legal accountability. The European AI Act (2025) operationalizes this through documentation requirements and the right to an explanation.

- Fairness concerns equitable treatment and the avoidance of discrimination. Eubanks (2018) and Crawford (2021) demonstrate that fairness cannot be achieved without addressing structural inequalities in data collection and processing.
- Privacy is rooted in Nissenbaum's (2020) contextual integrity and remains a cornerstone of ethical data governance. The GDPR, referenced throughout the institutional literature, operationalizes privacy by enforcing consent and limiting data use to specific contexts.
- Accountability requires assigning clear moral and legal responsibility. Floridi (2021) conceptualizes accountability as distributed moral agency, while the OECD (2025) and WEF (2023) translate it into governance mechanisms such as ethics boards and AI impact assessments.

These principles are deeply interdependent: transparency enables accountability, fairness requires privacy protections, and all are sustained by institutional trust. Their successful implementation depends on integrating ethical design, regulatory oversight, and human-centered governance.

Convergence and Remaining Gaps

A critical synthesis of the literature reveals a growing convergence between philosophical and institutional approaches. Floridi's information ethics provides the conceptual foundation for OECD's and EU's policy frameworks, while Nissenbaum's contextual privacy model is reflected in UNESCO's global recommendations. Vallor's virtue ethics resonates with the human-centric focus of the EU AI Act and OECD principles, demonstrating that theory and policy are beginning to align. However, three persistent gaps remain:

1. Implementation Gap: Institutional frameworks articulate ethical principles but often lack enforcement capacity and measurable indicators (OECD, 2025; WEF, 2023).
2. Interpretive Gap: Ethical terms such as "fairness" and "accountability" are interpreted differently across cultural and regulatory contexts, complicating harmonization (UNESCO, 2023).
3. Operational Gap: Most organizations lack technical and human resources to implement ethical governance at scale, particularly in emerging economies.

These gaps underscore the need for interdisciplinary collaboration and continuous ethical evaluation throughout the lifecycle of AI systems. They also justify the comparative methodological approach of this study, which integrates philosophical reflection with institutional and policy analysis.

Literature Review Summary

The reviewed literature collectively demonstrates that the ethics of data use in automated decision-making (ADM) occupies a critical intersection between philosophical reasoning, institutional governance, and socio-economic accountability. It reveals a gradual intellectual evolution from abstract moral philosophy to applied frameworks of regulation and policy. Philosophical works such as those of Floridi (2021), Nissenbaum (2020), Vallor (2022), and Coeckelbergh (2023) provide the normative and epistemological foundations for understanding how information, privacy, and human agency acquire moral meaning in data-driven environments. In contrast, social critiques by Eubanks (2018) and Crawford (2021) illuminate the ways in which data infrastructures and algorithmic systems reproduce systemic inequality and asymmetries of power, thus framing ethical governance as an instrument of social justice.

Institutional frameworks - including those of the OECD (2025), the European Commission (2025), UNESCO (2023), and the World Economic Forum (2023) - translate these normative ideals into operational standards through the codification of principles such as transparency, fairness, and accountability. Collectively, these documents represent a global movement toward the institutionalization of ethical AI. However, as noted by the OECD and UNESCO, this institutionalization remains uneven, with implementation gaps persisting across regions and sectors. Even within highly regulated environments such as the European Union, enforcement mechanisms are often fragmented, and ethical compliance depends heavily on institutional capacity and political commitment.

A key insight emerging from this synthesis is the interdependence of philosophical and institutional approaches. The theoretical frameworks of Floridi, Nissenbaum, Vallor, and Coeckelbergh do not exist in isolation - they inform and are reflected in global governance initiatives. For example, Floridi's concept of *distributed moral responsibility* underpins the OECD's emphasis on organizational accountability; Nissenbaum's *contextual integrity* directly resonates with GDPR and UNESCO's human-rights-centered approach; and Vallor's *technomoral virtues* find practical expression in the EU's human-centric AI model and "human-in-the-loop" design. This dynamic interplay between theory and policy underscores the multidimensional nature of ethical AI governance: it is at once philosophical, institutional, and procedural.

Nevertheless, the literature exposes three unresolved tensions. First, an **implementation tension**, where ethical guidelines exist but lack enforceability or measurable impact. Second, an **interpretive tension**, as key terms such as "fairness," "autonomy," and "accountability" remain fluid across cultural and legal contexts, leading to inconsistent applications. Third, a **structural tension**,

as global ethical frameworks are often designed from a Western epistemological standpoint, leaving questions about their adaptability in developing or transitional economies. The persistence of these tensions confirms that ethics in ADM cannot be universalized mechanically; it must be continually interpreted within specific institutional, cultural, and socio-economic contexts.

In this light, the literature establishes that ethical AI is not simply a moral adjunct to technology but an integral component of governance and economic development. Trust in automated systems directly influences institutional legitimacy, regulatory stability, and public confidence - key variables in sustainable digital economies. By linking ethics to accountability, transparency, and performance, scholars and organizations converge on the view that the ethical design of ADM systems is a prerequisite for inclusive and resilient governance.

The reviewed sources therefore provide a dual foundation for the present study:

1. **Theoretically**, they articulate a moral architecture for evaluating automated systems, grounded in principles of dignity, justice, and human oversight.
2. **Empirically and institutionally**, they offer frameworks for translating these principles into practice through legislation, governance structures, and corporate responsibility mechanisms.

This synthesis positions the ethics of data use not as a peripheral academic concern but as a strategic policy domain that intersects with economic regulation, digital innovation, and institutional reform. It also underscores the need for continuous interdisciplinary dialogue between philosophers, technologists, and policymakers to ensure that AI development remains aligned with societal values and democratic principles.

In conclusion, the literature review lays a conceptual bridge to the next sections of this study - *Analysis and Interpretation of Results* and *Research Methodology* - which seek to operationalize these ethical principles within concrete institutional contexts. By critically examining how the theoretical and normative insights of leading scholars are manifested - or neglected - in global and regional governance frameworks, the subsequent analysis aims to demonstrate that ethical governance of ADM is not only desirable but indispensable for the legitimacy and sustainability of modern decision-making system.

Analysis and interpretation of results

Overview of Analytical Focus

The ethical governance of data-driven automation has become one of the defining issues in contemporary socio-economic policy. Automated decision-making (ADM) systems - now pervasive across finance, telecommunications, public administration, and justice - raise questions not only about efficiency and performance but also about fairness, transparency, and institutional accountability. Building upon the literature reviewed and recent institutional reports, this analysis interprets how global and regional frameworks are addressing these ethical tensions and how they manifest in practical governance contexts. The discussion integrates conceptual findings from authors such as Floridi (2021), Nissenbaum (2020), and Eubanks (2018) with comparative evidence from the OECD (2025), the European Commission (2025), UNESCO (2024), and emerging Western Balkan initiatives (UET Policy Paper 2024).

The Expanding Role of Data in Decision-Making

Over the last decade, data have evolved from a resource for analytical insight into the *substrate* of decision architecture. In sectors such as banking, credit risk modeling increasingly relies on algorithmic scoring that integrates behavioral and social-media data (Brookings Institution, 2023). In telecommunications, customer segmentation and tariff optimization are largely determined by adaptive machine-learning models. These transformations illustrate what Floridi (2021) describes as the "infosphere" - a socio-technical ecosystem in which informational entities (data, models, and individuals) interact continuously.

Empirical sources indicate that 70 – 80 percent of strategic corporate decisions in OECD countries are now either partially or fully automated (OECD, 2025). Yet, the belief that data analytics produces neutral or objective outcomes is increasingly contested. As Eubanks (2018) notes, algorithmic systems often reflect the social biases embedded in their training datasets. The *illusion of neutrality* creates a moral hazard: institutions outsource ethical judgment to algorithms without fully understanding their limitations.

Comparative evidence shows differentiated approaches. The European Union enforces precautionary regulation through the AI Act (2025), requiring risk classification and human oversight, while the United States privileges innovation and voluntary compliance (NIST, 2024). Emerging economies, including several Western Balkan states, remain in a formative phase, often adopting EU guidelines

without equivalent enforcement capacity (Regional Cooperation Council [RCC], 2024). The asymmetry of ethical governance across jurisdictions reveals the uneven diffusion of moral responsibility in data-driven economies.

Transparency, Explainability, and Accountability

Transparency is consistently identified as both a normative value and a technical challenge. Mittelstadt et al. (2023) frame algorithmic opacity as a "crisis of explainability" arising from the complexity of machine-learning architectures and the proprietary protection of algorithms. In policy terms, opacity undermines democratic oversight: citizens and regulators cannot contest decisions they cannot understand.

The European AI Act institutionalizes transparency through documentation and audit obligations for "high-risk" systems. Complementary instruments - such as the OECD AI Policy Observatory (2025) and the UNESCO Recommendation on AI Ethics (2024) - extend the principle globally by requiring algorithmic impact assessments and disclosure of data provenance. Nonetheless, implementation remains inconsistent.

Empirical studies (Brookings Institution, 2023) show that algorithmic opacity has led to discriminatory credit denials and biased recruitment outcomes. The Amazon case (2019) remains emblematic: an AI-based recruitment tool was abandoned after it reproduced gender bias against female applicants. Similar issues have been reported in Albania's nascent digital-governance initiatives, where automated eligibility filters in social-service platforms lacked public documentation (UET Policy Paper, 2024).

The persistence of opaque ADM reflects a structural governance deficit. Accountability becomes diffused among developers, data suppliers, and institutional users. Floridi's (2021) concept of *distributed moral responsibility* underscores this fragmentation: when agency is dispersed across human and non-human actors, identifying culpability becomes morally and legally ambiguous.

Privacy and the Ethics of Data Stewardship

Privacy constitutes the ethical linchpin of data governance. Nissenbaum's (2020) theory of *contextual integrity* posits that ethical privacy is maintained only when information flows conform to contextual norms of appropriateness. ADM systems frequently violate this integrity by repurposing data beyond their initial consent framework.

The UNESCO (2024) global assessment found that 58 percent of surveyed institutions lacked formal data-retention or deletion protocols, and only 36 percent conducted regular privacy-impact assessments. Even within the EU, enforcement

of GDPR principles remains uneven - particularly in small and medium-sized enterprises and public agencies.

From a normative perspective, privacy breaches erode not only individual rights but the moral *dignity of informational identity* (Floridi, 2021). When individuals are reduced to data vectors in predictive models, their autonomy becomes instrumentalized. In the Western Balkan context, weak data-protection authorities further exacerbate vulnerability: national AI strategies (e.g., Albania 2023 Draft Strategy on AI) reference ethical principles but lack independent oversight bodies to enforce them. Thus, privacy protection remains largely declarative rather than operational.

Fairness, Impartiality, and Social Justice in Algorithms

Fairness remains the most debated ethical criterion in AI governance. Floridi (2021) and Coeckelbergh (2023) distinguish between *procedural fairness* (equal treatment in process) and *substantive fairness* (equitable outcomes). Empirical research indicates that algorithms trained on unbalanced data amplify socio-economic disparities, particularly in credit, employment, and judicial decisions (Brookings Institution, 2023).

Mittelstadt et al. (2023) propose a multidimensional evaluation - distributive, procedural, and corrective fairness - emphasizing that ethical fairness cannot be reduced to mathematical parity. The *human-in-the-loop* principle, promoted by the Stanford HAI (2024) and OECD (2025), addresses this gap by ensuring human oversight in critical decision points. However, most institutions implement human review only post-decision, thus limiting its corrective potential.

Regional evidence corroborates these findings. In pilot AI projects within Albanian financial institutions, bias-testing protocols are seldom applied, and model-validation documentation is minimal (Bank of Albania Research Unit, 2024). These deficiencies suggest that fairness remains aspirational in contexts where regulatory literacy and technical capacity are limited.

Ethically, fairness must be understood not merely as a computational adjustment but as a social commitment. As Eubanks (2018) notes, algorithms mirror structural inequality; therefore, achieving fairness requires structural reform in data governance - diversifying datasets, embedding ethical review boards, and adopting participatory design that includes affected communities.

Institutional and Economic Accountability

Accountability extends beyond transparency to encompass institutional liability and governance design. The OECD (2025) identifies the creation of AI Ethics Boards and Algorithmic Impact Assessments (AIAs) as primary mechanisms for

accountability. Yet, the effectiveness of these tools depends on institutional will and resource allocation.

The World Economic Forum (2024) observes that fewer than one-third of large corporations publicly report on AI ethics performance. Even fewer link these metrics to executive accountability or corporate governance structures. This phenomenon of "ethics washing" (Crawford, 2021) reflects a symbolic compliance with ethical norms for reputational benefit rather than substantive behavioral change.

Public-sector accountability exhibits similar shortcomings. In several EU member states and associated economies, algorithmic tools for tax risk assessment and social-benefit eligibility operate without clearly designated human supervisors. Floridi's (2021) notion of *distributed agency* aptly captures this vacuum of responsibility: while decisions have collective origins, victims experience their consequences individually.

For countries such as Albania, where digital transformation is accelerating under EU alignment processes, the challenge is twofold - adopting international norms while building domestic enforcement mechanisms. The National Strategy for Artificial Intelligence (2023–2030) emphasizes transparency and fairness yet lacks measurable accountability indicators (Ministry of Infrastructure and Innovation [MII], 2024). Integrating OECD and EU accountability standards into local governance would thus be a decisive step toward credible ethical implementation.

Cross-Sectoral and Comparative Insights

Synthesizing data across sectors reveals consistent ethical asymmetries:

Sector	Key Ethical Issue	Observed Outcome	Illustrative Source
Finance	Bias in credit scoring	Exclusion of vulnerable groups	Brookings Institution (2023)
Employment	Algorithmic discrimination	Gender bias in hiring	Amazon Case (2019)
Health	Diagnostic misclassification	Unclear accountability	UNESCO (2024)
Public Services	Data reuse without consent	Privacy breaches	OECD (2025)
Telecommunications	Behavioral profiling	Limited explainability	UET Policy Paper (2024)

This comparative mapping underscores that ethical vulnerabilities are systemic rather than sector-specific. They stem from a shared dependence on opaque data ecosystems and insufficient ethical governance capacity.

Economic implications are equally salient: trust deficits in ADM can generate measurable financial costs through litigation, regulatory penalties, and reputational damage. Conversely, transparent and accountable AI systems correlate with higher consumer confidence and sustainable digital-market growth (World Bank Digital

Economy Report, 2024). Thus, ethical governance is not a moral luxury but an economic imperative.

Interpretation of Results and Emerging Global Trends

Across analytical dimensions, one central finding emerges: the ethical sustainability of ADM depends less on the existence of rules than on their *institutional operationalization*. A global normative convergence is evident - OECD (2025), UNESCO (2024), and the EU AI Act (2025) articulate near-identical principles of transparency, fairness, accountability, and human oversight. However, practical implementation remains fragmented due to disparities in enforcement culture, technical expertise, and political will.

Three intertwined trends define the current trajectory:

1. **Ethical Institutionalization and Governance Integration**
   Ethics is increasingly institutionalized through dedicated governance bodies, audit tools, and corporate policies. Yet, as Crawford (2021) cautions, these often serve symbolic legitimacy rather than transformative change. For genuine institutionalization, ethics must be embedded in performance metrics and compliance audits, not confined to advisory rhetoric.
2. **Democratization of Algorithmic Explainability**
   There is growing recognition of the "right to an explanation," as codified in Article 22 of the GDPR and reinforced by the AI Act (2025). Civil-society actors are demanding interpretability not only for regulators but for affected individuals. This democratization of transparency reshapes ethical discourse from an institutional to a citizen-centric paradigm.
3. **Re-centering of Human Agency and Socio-Economic Justice**
   A shift toward *human-centered AI* is evident in both policy and scholarship (Stanford HAI, 2024). Rather than replacing human judgment, AI should augment it, preserving accountability and empathy in socio-economic decisions. For developing economies, this re-centering implies integrating ethical training into digital-skills curricula and aligning AI development with social-equity objectives.

Synthesis and Policy Implications for Economic Governance

For *Economicus Journal* readers - policy analysts, economists, and decision-makers - the results have direct implications:

- Macroeconomic Governance: Ethical AI reduces systemic risk by enhancing predictability and public confidence in automated fiscal tools.

- Institutional Economics: Embedding ethical standards into organizational routines increases transaction trust and reduces information asymmetry.
- Development Policy: In transitional economies, ethical frameworks aligned with OECD and EU standards can accelerate EU accession benchmarks for governance and digitalization.

The Albanian case illustrates both opportunity and constraint. Integrating AI governance within the existing regulatory framework of the National Data Protection Authority, coupled with public-private cooperation on algorithmic auditing, would bridge normative ambition and institutional reality. Moreover, leveraging university research centers (e.g., UET and Academy of Sciences 2024 Joint AI Lab) could ensure continuous ethical evaluation of data-driven projects.

Conclusion of Analytical Findings

The analysis demonstrates that the ethics of data use in automated decision-making is not merely a theoretical discourse but an applied governance challenge with measurable economic and social consequences. Transparency, fairness, privacy, and accountability function as interdependent pillars of ethical sustainability. However, without institutional mechanisms to enforce and monitor these values, automation risks deepening inequality and eroding trust.

In conclusion, the global movement toward explainable, human-centered, and accountable AI represents both a normative evolution and an economic necessity. For countries and organizations aiming to align with EU and OECD standards, ethics must transition from policy aspiration to operational practice - anchored in measurable outcomes, enforced governance, and continuous public scrutiny.

Research methodology

Conceptual and Methodological Orientation

The methodological orientation of this research is grounded in a qualitative-interpretivist paradigm, appropriate for exploring the ethical, institutional, and socio-economic dimensions of automated decision-making (ADM). Given that the study focuses on the *normative and contextual interpretation* of ethical principles - such as transparency, fairness, accountability, and privacy - a qualitative approach provides the epistemological flexibility to capture value-laden phenomena that cannot be quantified through positivist designs (Creswell & Plano Clark, 2021; Silverman, 2022).

The interpretivist orientation assumes that social reality - in this case, the ethical use of data - is constructed through discourse, policy, and institutional

practice. It therefore requires analytical methods that can integrate both conceptual analysis (ethics as theory) and empirical content (policy as practice). This duality is essential in addressing the research objectives: to understand how ethical frameworks are defined, operationalized, and contested in the context of ADM systems. To strengthen analytical robustness, this study combines three interrelated methodologies:

1. Thematic analysis for extracting and classifying recurring ethical patterns within scholarly and institutional texts (Braun & Clarke, 2019);
2. Comparative policy analysis for evaluating how different governance regimes (European, American, and Asian) translate ethical principles into operational mechanisms;
3. Conceptual analysis for clarifying and synthesizing key ethical constructs.

The result is a hybrid methodological model - philosophically interpretive but empirically grounded - that aligns with *Economicus Journal's* emphasis on evidence-based analysis of economic and governance systems.

Research Design

The study adopts an exploratory-descriptive design. Exploratory, because the ethical governance of data-driven decision-making remains an emerging research area in Albania and the Western Balkans; descriptive, because it systematically identifies how existing frameworks address (or fail to address) ethical dilemmas in practice. The design is structured in four sequential phases:

1. Conceptual Scoping - defining key constructs (ethics, data, automation, decision-making, transparency, accountability) through theoretical and philosophical sources (Floridi, 2021; Nissenbaum, 2020).
2. Documentary Collection and Selection - gathering relevant institutional documents, including the *EU AI Act (2025)*, *OECD AI Principles (2025)*, and *UNESCO AI Ethics Recommendations (2024)*, alongside Albanian and regional AI strategy drafts.
3. Analytical Coding and Interpretation - applying thematic and comparative methods to classify findings.
4. Synthesis and Integration - consolidating insights into an ethical evaluation model that links theory to policy and governance outcomes.

The design follows a non-linear iterative logic, consistent with hermeneutic methodology (Gadamer, 1989; Yin, 2020), allowing findings to refine theoretical understanding in a cyclical process of interpretation.

Data Sources and Sampling Framework

Types of Data
Data for this study are exclusively secondary and derived from multiple, triangulated sources to ensure validity and breadth. They include:

- Academic sources: peer-reviewed journals and scholarly books on ethics, information systems, and AI governance (e.g., Floridi, 2021; Eubanks, 2018; Mittelstadt et al., 2023; Vallor, 2022; Coeckelbergh, 2023).
- Institutional sources: regulatory and policy documents such as the *European AI Act (2025)*, *OECD AI Policy Observatory Reports (2025)*, *UNESCO Recommendation on the Ethics of Artificial Intelligence (2024)*, and *World Economic Forum Reports (2023–2024)*.
- Regional policy documents: national AI strategy drafts from Albania (MII, 2024), Western Balkans digital-governance roadmaps (RCC, 2024), and UET academic policy analyses.
- Technical frameworks: international standards such as the *NIST AI Risk Management Framework (2024)*.

Sampling Strategy
Given the conceptual and normative nature of the study, a purposive sampling strategy was employed. The inclusion criteria were:

1. Relevance: sources addressing ethics in AI, data governance, or ADM;
2. Temporal proximity: publications between 2018 and 2025 to ensure recency;
3. Authority: peer-reviewed or officially sanctioned documents;
4. Comparative coverage: inclusion of global, European, and regional perspectives.

A total of **42 documents** were selected after initial screening, of which **28** formed the analytical core. Sources were organized in a bibliographic database (Zotero) with coding tags corresponding to ethical principles (e.g., transparency, fairness, privacy, accountability).

Methods of Analysis

Thematic Analysis
Thematic analysis served as the primary analytic method, enabling the identification of patterns and relationships across diverse textual data. Following Braun and Clarke's (2019) six-step process, the study conducted:

1. Data Familiarization - repeated reading of all documents to identify initial ethical indicators;
2. Coding - assigning semantic codes such as "algorithmic bias," "transparency gap," and "distributed responsibility";
3. Theme Development - grouping codes into broader conceptual themes (e.g., fairness, explainability, institutional accountability);
4. Theme Review - cross-comparing across authors and institutions to validate coherence;
5. Theme Definition and Naming - defining each ethical dimension with supporting literature;
6. Reporting - synthesizing themes into an interpretive matrix linking theory and policy.

This process yielded four dominant themes: (1) Data Stewardship and Bias; (2) Transparency and Explainability; (3) Fairness and Human Oversight; and (4) Accountability and Governance. Each theme informed the analytical structure presented in the "Results" section.

Comparative Policy Analysis

To contextualize ethical findings, a comparative policy analysis was performed across major governance models:

Model	Governance Approach	Ethical Emphasis	Key Features
European Union	Legally binding regulation	Human oversight, transparency	AI Act (2025); GDPR
United States	Self-regulatory & innovation-led	Corporate ethics, risk management	NIST AI RMF (2024)
Asia (Japan, South Korea, Singapore)	Innovation-focused	Socio-economic growth, human trust	OECD 2025 regional reports
Western Balkans / Albania	Normative alignment with EU	Emerging frameworks, limited capacity	RCC 2024; MII 2024

This comparison revealed that while the EU model provides the most comprehensive legal coverage, it remains resource-intensive; the U.S. model prioritizes flexibility at the cost of enforceability; and regional models prioritize compliance alignment but lack institutional maturity.

Conceptual Analysis

Conceptual analysis was employed to clarify the ethical foundations of ADM. Following Floridi's (2021) *information ethics* and Coeckelbergh's (2023) *relational ethics*, this method unpacked how core values (autonomy, justice, responsibility) are redefined by algorithmic decision-making.

Conceptual mapping was used to link ethical principles to operational mechanisms, as shown below:

Ethical Concept	Operational Mechanism	Example Framework
Transparency	Algorithmic explainability	EU AI Act (2025)
Fairness	Bias detection audits	OECD (2025)
Accountability	Algorithmic Impact Assessment	WEF (2023)
Privacy	Data minimization & contextual integrity	Nissenbaum (2020); GDPR

This conceptual synthesis provided the theoretical lens for interpreting institutional practices.

Analytical Logic and Data Interpretation

The interpretive logic followed a hermeneutic-deductive process (Yin, 2020; Gadamer, 1989). The analysis oscillated between theoretical abstraction and empirical validation - what Alvesson and Sköldberg (2018) describe as "reflexive interpretation."

Thematic clusters from institutional documents were compared with philosophical literature to test conceptual coherence. For example, Floridi's principle of "distributed moral responsibility" was cross-referenced with OECD's institutional accountability mechanisms. Similarly, Nissenbaum's notion of contextual integrity was examined in light of GDPR enforcement reports and UNESCO policy recommendations.

This iterative cross-validation ensured that the findings were not only descriptive but also conceptually integrated, providing a multidimensional understanding of ethical ADM.

Validity, Reliability, and Triangulation

Validity

In qualitative research, validity concerns the plausibility and internal consistency of interpretations rather than statistical precision. Three strategies were employed:

- Source Triangulation: Using multiple types of documents (academic, institutional, policy) to confirm findings.
- Theoretical Triangulation: Applying diverse frameworks (philosophical ethics, governance, socio-economics) to interpret results.
- Temporal Triangulation**:** Incorporating documents from 2018–2025 to account for evolving norms.

Additionally, interpretive validity was maintained by contextualizing global frameworks within regional realities, particularly in the Western Balkans.

Reliability
Reliability was ensured through methodological transparency and auditability. A document analysis log was maintained, recording search terms, source origins, and coding decisions. Consistency was verified through repeated coding cycles and cross-source comparison (Silverman, 2022). The inclusion of official institutional documents minimized interpretive subjectivity.

Researcher Reflexivity
Given the normative nature of ethics research, reflexivity was integral. The researcher acknowledged potential interpretive bias as a participant-observer within the AI ethics discourse. Reflexive notes were kept during analysis to differentiate empirical evidence from normative inference (Lincoln & Guba, 1985).

Ethical and Regulatory Compliance

Even though no primary human data were collected, the study followed rigorous academic-ethical standards. All sources were accurately cited per APA 7th edition. Institutional reports were used under fair-use and academic-research provisions. Sensitive policy materials were analyzed objectively without political or corporate endorsement.

Furthermore, the study aligns with the European Code of Conduct for Research Integrity (ALLEA, 2023) and the UET Research Ethics Guidelines (2024). Ethical review was implicit through adherence to transparency, accountability, and intellectual honesty in interpretation.

For policy-relevant material, data were cross-checked against open-access repositories to ensure authenticity and prevent misinformation - an important safeguard in the field of AI governance.

Methodological Limitations

Despite methodological rigor, certain limitations remain:

1. Dependence on Secondary Data: The absence of primary fieldwork limits contextual granularity, especially concerning institutional behavior in Albania.
2. Evolving Technological Context: The pace of AI development means that some frameworks analyzed (e.g., OECD 2025) may be superseded quickly, affecting long-term applicability.

3. Comparative Bias: While global documents are well-documented, regional sources are sparse and less standardized, introducing asymmetry in comparison.
4. Language and Access Barriers: Some regional regulatory drafts are unpublished or not translated into English, restricting direct analysis.

Nevertheless, these limitations are offset by methodological triangulation, cross-verification with institutional data, and reliance on authoritative international frameworks.

Contribution and Methodological Relevance

This methodological model contributes to scholarship and policy in three ways:

1. Interdisciplinary Integration: It bridges philosophy, economics, and public policy, illustrating how ethical theory can inform regulatory design.
2. Policy Translation Framework: By mapping ethical principles to operational mechanisms, it provides a tool for policymakers to assess the ethical maturity of ADM systems.
3. Regional Applicability: The model offers a replicable framework for emerging economies - such as Albania - to evaluate their alignment with OECD and EU ethical governance standards.

For *Economicus Journal* readers, this methodological contribution situates ethics not as a moral abstraction but as a measurable dimension of institutional and economic performance.

Summary of Methodological Structure

Phase	Method	Objective	Key Output
1	Conceptual Scoping	Define key ethical constructs	Conceptual framework
2	Data Collection	Identify global and regional documents	Source database
3	Thematic Analysis	Extract recurring ethical themes	Ethical taxonomy
4	Comparative Analysis	Contrast governance models	Policy matrix
5	Conceptual Integration	Map theory to practice	Analytical synthesis
6	Validation	Ensure credibility and coherence	Triangulated findings

This systematic structure ensures methodological transparency, coherence, and reproducibility.

Conclusion

In methodological terms, this study demonstrates that exploring the ethics of data use in automated decision-making requires more than abstract reasoning or technical assessment - it demands a *multi-layered interpretive process* that integrates philosophy, institutional practice, and policy evaluation. The qualitative-interpretivist framework adopted here proves particularly suited to unpacking the interplay between ethical norms and decision-making architectures.

By combining thematic, comparative, and conceptual methods, the research achieves a holistic understanding of how global ethical principles - transparency, fairness, privacy, and accountability - translate into institutional practice. The inclusion of European and regional perspectives ensures both academic generalizability and policy relevance.

Ultimately, the methodology contributes to the emerging field of *ethical governance studies*, offering a replicable model for analyzing ADM systems in both developed and transitioning economies. As data-driven automation continues to shape economic and social life, this approach provides a pathway for aligning innovation with human values and responsible institutional behavior.

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