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Responsible AI: A Comparative Review Of Global Ethical Standards And Governance Framework

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ABSTRACT

Artificial Intelligence (AI) is becoming an important part of different industries and is changing the way organisations work and make decisions. It helps improve work efficiency, analyse information and support better decision-making. However, the increasing use of AI has also created concerns related to transparency, fairness, accountability, privacy and human involvement in decision-making. These concerns show the need for proper ethical standards and guidelines to ensure the responsible use of AI. This study aims to compare the ethical standards and governance frameworks introduced by different international organisations and countries. It focuses on five major frameworks: UNESCO's Recommendation on the Ethics of Artificial Intelligence, OECD AI Principles, NIST AI Risk Management Framework, the European Union AI Act and India's AI Governance Guidelines. The study is based on secondary data collected from official documents, government guidelines, policy reports and relevant research publications. These frameworks are compared using five parameters: transparency and explainability, fairness, accountability, privacy and data protection, and human oversight. The study helps to understand how these frameworks address ethical issues and where their approaches are similar or different. It also examines the importance of applying these guidelines in organisations while developing and using AI systems. Overall, the study highlights that responsible AI governance is necessary to reduce risks, protect people's rights and build trust in AI technology. It also shows the importance of balancing technological growth with ethical
values.

Keywords: *Artificial Intelligence, AI Governance Frameworks, AI Ethics, Ethical Standards.*

INTRODUCTION

Artificial Intelligence (AI) is becoming an important part of modern technology and is changing the way different industries operate. Its applications are increasing in sectors such as healthcare, education, banking, busess and public administration. AI helps organisations improve their work processes, analyse information and support decision-making. At the same time, its growing use has raised concerns about biased decisions, lack of transparency, misuse of personal data and unclear responsibility. These concerns highlight the importance of establishing proper ethical standards and governance guidelines to ensure that AI is used responsibly.

Different international organisations and countries have introduced AI governance frameworks to address these challenges. However, their approaches and requirements differ according to their needs and priorities. This research focuses on comparing five major frameworks: UNESCO's Recommendation on the Ethics of Artificial Intelligence, OECD AI Principles, NIST AI Risk Management Framework, the European Union AI Act and India's AI Governance Guidelines. The study examines these frameworks based on five parameters: transparency and explainability, fairness, accountability, privacy and data protection, and human oversight. The comparison aims to understand how these frameworks address ethical concerns and support the responsible development and use of Artificial Intelligence.

NEED AND IMPORTANCE OF THE STUDY:

The growing use of Artificial Intelligence across different sectors has made ethical standards and proper governance increasingly important. Although AI provides benefits such as improved efficiency, innovation and better decision-making, it also creates concerns related to transparency, fairness, accountability, privacy and human control. Different countries and international organisations have introduced guidelines and regulations to address these challenges. However, their approaches and requirements are not the same. Therefore, it is important to study these frameworks to understand how they guide the responsible development and use of AI.

REVIEW OF LITERATURE:

Several studies have examined the development of Artificial Intelligence (AI) governance frameworks, ethical standards, and regulatory policies across different countries and sectors. Yoshija Walters (2024), in Managing the Race to the Moon: Global Policy and Governance in Artificial Intelligence Regulation—A Contemporary Overview and an Analysis of Socioeconomic Consequences, examined the challenges associated with global AI regulation and its socioeconomic implications. The study highlighted differences in regulatory approaches across regions and emphasized the importance of balancing technological innovation with ethical responsibility, democratic values, and public interest. Similarly, Piyush Kumar Siddhapura and Vishvash Patel (2024), in Developing Ethical AI Frameworks: A Comparative Analysis of Global Standards and Practices, explored ethical AI frameworks across different countries and sectors. The study emphasized the importance of transparency, accountability, inclusiveness, and international cooperation while highlighting the influence of cultural and institutional differences on ethical AI implementation. Amna Batool,Didar zowghi, Muneera Bano (2025), in AI Governance: A Systematic Literature Review, examined the responsibilities, processes, and mechanisms involved in AI governance. The study categorized governance practices at team, organizational, industrial, national, and international levels, highlighting the importance of coordinated governance among different stakeholders. Further, Amna Batool, Yue Liu, Sunny Lee, and Liming Dong (2026), in The Anatomy of AI Policies: A Systematic Comparative Analysis of AI Policies Across the Globe, analyzed 17 AI policies from different regions and international organizations. The study identified differences in enforceability, scalability, implementation practices, and resource requirements, emphasizing the need for an integrated and adaptable AI governance framework. Another study, Sector-Specific Ethics in Artificial Intelligence: Clinical Applications, Military Automation, Autonomous Vehicles, and Educational Technology, by Connor Nitchals (2026) examined ethical challenges associated with AI applications in healthcare, defense, transportation, and education. It highlighted the importance of sector-specific governance approaches while maintaining common principles such as accountability, transparency, and public trust. The study Towards Adaptive AI Governance: Comparative Insights from the U.S., EU, and Asia compared AI governance approaches across the United States, European Union, and Asia, by Vikram kulothungan and Deepti Gupta (2025).

It identified differences between market-driven innovation, risk-based regulation, and state-guided strategies, emphasizing the importance of adaptive governance and international regulatory coordination. Similarly, Ethical Frameworks for Artificial Intelligence: A Comparative Study, by Vishali Mishra, Ujjwal Karn, Vasanth Rajendran, Monojith Banerjee and Harshal Darade(2025) examined AI ethics policies across the European Union, United States, Canada, Asia, and major technology companies. The study identified fairness, transparency, accountability, and data quality as essential elements of responsible AI development. Further, Governance in the Age of Artificial Intelligence: A Comparative Analysis of Policy Framework in BRICS Nations, by Animesh Kumar and Rahul Sharma (2025) investigated AI governance within the expanded BRICS countries. The study emphasized the importance of strong legal frameworks, stakeholder participation, transparency, and accountability in promoting responsible AI development. Another study, Ethical Theories, Governance Models, and Strategic Frameworks for Responsible AI Adoption and Organizational Success, by Mitra Madanchian and Hamed Thaerdoost (2025) explored the application of ethical theories such as utilitarianism, deontology, and virtue ethics to organizational AI adoption. It highlighted the importance of integrating ethical principles into organizational decision-making, risk assessment, and governance practices to strengthen accountability, trust, and organizational performance. Finally, A Comparative Analysis of AI Privacy Concerns in Higher Education: News Coverage in China and Western Countries, by Yujie Xue, Vinayagum Chinapah and Chang Zhu(2025) examined AI-related privacy concerns in higher education between 2019 and 2024. The findings identified AI-based proctoring, student data security, and institutional governance as major concerns, while also revealing differences in privacy-related media coverage between China and Western countries. Collectively, these studies provide a comprehensive understanding of global AI governance and its ethical, regulatory, and societal implications. They highlight the importance of transparency, fairness, accountability, privacy, and safety in developing responsible AI policies. However, differences in regulatory approaches, implementation practices, and governance priorities continue to create challenges for establishing consistent global AI standards. These findings provide a foundation for the present study, which examines selected global AI policies across five research parameters, namely transparency, fairness, accountability, privacy, and safety, to identify similarities, differences, and gaps in existing AI governance frameworks.

RESEARCH GAP:

Previous studies have explored AI governance and ethical policies across different countries and sectors. However, a comparison of selected global AI policies using the same five parameters transparency, fairness, accountability, privacy, and safety remains limited in the literature reviewed. Therefore, the present study focuses on comparing these policies to identify their similarities, differences, and gaps in addressing responsible AI governance.

OBJECTIVES:

- To examine the key features of selected AI policies based on transparency, fairness, accountability, privacy, and safety.
- To compare the approaches adopted by different AI policies across the five selected parameters.
- To suggest measures for improving the effectiveness of AI governance frameworks.

RESEARCH METHODOLOGY:

The present study adopts a qualitative research approach with a descriptive and comparative research design to examine 17 selected Artificial Intelligence (AI) policies from different countries and regions across the globe. The study is based entirely on secondary data collected from official AI policy documents, government publications, regulatory frameworks, and relevant research papers. Research papers published between 2024 and 2026 are considered to support the study. Data is collected through a systematic review of the selected documents, focusing on five key parameters: transparency, fairness, accountability, privacy, and safety. The collected information is examined qualitatively and organized according to these parameters to understand the approaches adopted by different AI policies and identify their similarities, differences, and gaps in addressing responsible AI governance.

INTERPRETATIONS AND IMPLICATIONS:

The present study focuses on comparing five major Artificial Intelligence governance frameworks: UNESCO's Recommendation on the Ethics of Artificial Intelligence, OECD AI Principles, NIST AI Risk Management Framework, European Union AI Act and India's AI Governance Guidelines.The findings of the study are discussed based on five important parameters:

transparency and explainability, fairness, accountability, privacy and data protection, and human oversight.

Transparency and Explainability

The study shows that all five frameworks give importance to transparency and explainability in AI systems. UNESCO and OECD focus on making AI-related information understandable and accessible to people. NIST gives importance to proper documentation, explanations and evaluation of AI systems. The European Union AI Act includes transparency requirements, especially for high-risk AI systems. Similarly, India's AI Governance Guidelines encourage sharing information and providing suitable disclosures. This shows that people should be able to understand how AI systems work and how their decisions may affect them.

Fairness

The findings show that fairness is important to prevent bias and discrimination in AI-based decisions. UNESCO focuses on equal opportunities and protecting vulnerable groups, while OECD promotes diversity and fair treatment. NIST highlights the need to identify and reduce bias in AI data and outcomes. The European Union AI Act addresses fairness through data quality and risk-management requirements. India's AI Governance Guidelines also focus on reducing bias and promoting inclusiveness by considering the diversity of the Indian population. This indicates that AI systems should be developed and used in a way that provides fair treatment to everyone.

Accountability

Accountability is important to ensure that responsibility for AI-related decisions is clearly defined. UNESCO and OECD highlight the responsibility of individuals and organisations involved in AI activities. NIST focuses on proper governance, monitoring and evaluation of AI systems. The European Union AI Act provides specific responsibilities for AI providers and deployers. India's AI Governance Guidelines also encourage audits, reporting and grievance redressal. The findings show that organisations should have clear responsibilities and proper monitoring systems to identify and address problems caused by AI.

Privacy and Data Protection

The study shows that privacy and data protection are important because AI systems use large amounts of information, including personal data. UNESCO and OECD emphasise protecting personal information and respecting individual rights. NIST focuses on identifying and reducing privacy-related risks. The European Union AI Act addresses data governance along with existing data-protection laws such as GDPR. India's AI Governance Guidelines also highlight responsible data handling and privacy safeguards. This shows that organisations must take proper care while collecting, storing and using personal information through AI systems.

Human Oversight

Human oversight is necessary to ensure that AI systems are used under proper human supervision. UNESCO emphasises that important decisions should not be left entirely to AI systems. OECD supports a human-centred approach, while NIST highlights the role of human judgement in evaluating and managing AI risks. The European Union AI Act includes human oversight requirements for high-risk AI systems. India's AI Governance Guidelines also encourage human involvement in decisions that may significantly affect individuals. This shows that AI should support human decision-making rather than completely replace human judgement.

Comparison of the Four International Frameworks with India

When the four international frameworks are compared with India's AI Governance Guidelines, it can be understood that they share many common principles but follow different approaches. In transparency, UNESCO, OECD, NIST and the EU focus on making AI systems understandable through information sharing, documentation and disclosures, while India also encourages transparency through reporting and information sharing. In fairness, all the frameworks aim to reduce bias and discrimination, with India giving importance to inclusiveness in its diverse population. In accountability, the international frameworks focus on responsibility, monitoring and legal requirements, while India's guidelines encourage audits, reporting and grievance redressal. Regarding privacy, all the frameworks highlight the protection of personal information, but their legal and regulatory approaches differ. In human oversight, all five frameworks recognise the importance of human involvement in important AI decisions.

Overall, India's guidelines follow several principles found in international frameworks while considering the country's own needs and priorities.

Organisational Adoption and Practical Implementation

AI governance is not limited to government policies, as organisations also have an important role in following ethical AI practices. Companies such as IBM, Microsoft, Meta, Amazon Web Services, AXA, NEC and PwC have been discussed in OECD case studies related to trustworthy AI. The NIST AI Risk Management Framework also provides guidance to organisations on identifying and managing AI-related risks. In the European Union, organisations developing and using AI systems need to follow the applicable requirements of the AI Act. In India, institutions such as MeitY, NITI Aayog, CERT-In and RBI have important roles in AI policy and sectoral governance. In practical terms, organisations can follow AI governance principles by checking AI systems for bias, providing clear information about AI decisions, protecting personal data, assigning responsibilities and ensuring human involvement in important decisions. These practices can help organisations use AI responsibly and build trust among people.

FINDINGS OF THE STUDY:

- The study finds that all five AI governance frameworks emphasise transparency. UNESCO and OECD promote accessible information, NIST focuses on documentation, the EU AI Act includes disclosure requirements, and India’s Guidelines encourage information sharing.
- Fairness is a common principle across the frameworks. They aim to reduce bias and discrimination, promote equal opportunities and ensure that AI systems consider the needs of different individuals and communities.
- Accountability is important for clearly defining responsibility for AI-related decisions. The frameworks encourage governance, monitoring, documentation, audits and suitable mechanisms to address problems caused by AI systems.
- All five frameworks recognise the importance of privacy and data protection. They encourage responsible handling of personal information, suitable privacy safeguards and compliance with applicable data-protection requirements.

- Human oversight is considered essential for responsible AI use. The frameworks emphasise that AI should support human judgement, particularly when decisions may significantly affect individuals or society.
- The comparison shows that UNESCO and OECD provide ethical principles, NIST focuses on risk management, the EU AI Act establishes legal requirements, and India's Guidelines promote responsible AI according to the country's needs.
- Although the frameworks follow different approaches, they share common objectives of promoting transparency, fairness, accountability, privacy and human oversight in AI development and use.
- Organisations play an important role in implementing AI governance. They can identify bias, provide clear information, protect personal data, assign responsibilities and ensure human involvement in important decisions.
- The OECD case studies discuss organisations such as IBM, Microsoft, Meta, Amazon Web Services, AXA, NEC and PwC in relation to trustworthy AI. NIST and the EU AI Act also provide guidance and requirements for responsible organisational AI use.
- In India, institutions such as MeitY, NITI Aayog, CERT-In and RBI contribute to AI policy and sectoral governance, highlighting the importance of institutional responsibilities and applicable regulations.
- Overall, the findings indicate that responsible AI governance can help reduce risks, protect individual rights and build public trust. A balance between technological development and ethical values is necessary for the safe and fair use of AI.

SUGGESTIONS OF THE STUDY:

- Organisations should promote the ethical and responsible use of AI by ensuring that AI systems are fair, transparent and free from discrimination.
- Organisations should provide clear information about AI-based decisions so that employees and users can understand how these systems work.
- Organisations should protect personal and confidential information by following proper data protection practices while collecting, storing and using data.
- Management should ensure human involvement in important AI-based decisions so that AI supports human judgement rather than completely replacing it.

- Organisations should clearly define roles and responsibilities for monitoring AI systems and addressing any errors, risks or ethical issues.
- Governments and organisations should regularly review their AI policies and guidelines to keep them aligned with technological developments and changing ethical requirements.

CONCLUSION:

Artificial Intelligence is becoming an important part of different sectors, but its increasing use also creates ethical challenges. This study compared five AI governance frameworks based on transparency, fairness, accountability, privacy and human oversight. The comparison shows that all five frameworks support the responsible use of AI, but follow different approaches. India's AI Governance Guidelines also reflect many international principles while considering the country's needs. The study highlights that organisations should focus on reducing bias, protecting personal data and maintaining human involvement in important decisions. Overall, proper AI governance is important to build trust, protect individual rights and ensure the responsible use of AI in the future.

REFERENCES:

[1] Walter, Y. (2024). Managing the race to the moon: Global policy and governance in artificial intelligence regulation—A contemporary overview and an analysis of socioeconomic consequences. *Discover Artificial Intelligence, 4,* Article 14. https://doi.org/10.1007/s44163-024-00109-4

[2] Batool, A., Zowghi, D., & Bano, M. (2025). AI governance: A systematic literature review. *AI and Ethics, 5,* 3265–3279. https://doi.org/10.1007/s43681-024-00653-w

[3] Lund, B. D., Orhan, Z., Mannuru, N. R., Bevara, R. V. K., Porter, B., Vinaih, M. K., & Bhaskara, P. (2025). Standards, frameworks, and legislation for artificial intelligence (AI) transparency. *AI and Ethics, 5,* 3639–3655. https://doi.org/10.1007/s43681-025-00661-4

[4] Du, J. (2025). *Toward responsible and beneficial AI: Comparing regulatory and guidance-based approaches—A comprehensive comparative analysis of artificial intelligence governance frameworks across the European Union, United States, China, and IEEE* [Preprint]. arXiv. https://doi.org/10.48550/arXiv.2508.00868

[5] Batool, A., Lee, S., Liu, Y., & Dong, L. (2026). The anatomy of AI policies: A systematic comparative analysis of AI policies across the globe. *AI and Ethics, 6,* Article 55. https://doi.org/10.1007/s43681-025-00886-3

[6] Albous, M. R., Al-Jayyousi, O. R., & Stephens, M. (2025). AI governance in the GCC states: A comparative analysis of national AI strategies. *Journal of Artificial Intelligence Research, 82.* https://doi.org/10.1613/jair.1.17619

[7] Ghosh, A., Saini, A., & Barad, H. (2025). Artificial intelligence in governance: Recent trends, risks, challenges, innovative frameworks and future directions. *AI & Society, 40,* 5685–5707. https://doi.org/10.1007/s00146-025-02312-y