



**RESEARCH PAPER**

**The Rise of Artificial Intelligence and the Transformation of Global Governance: A Critical Analysis of Opportunities, Risks and Regulatory Frameworks**

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**ABSTRACT**

This research examines the role of artificial intelligence (AI) and transformation of global governance, its opportunities, risks and regulatory challenges at international level. The research investigates how AI is revamping the governance structures, policy making procedures, international security and geopolitical relations between the states. Whilst AI provide vast opportunities in healthcare, innovation, administration and sustainable development, it also invents various problems such as cybersecurity threats, privacy issues, misinformation, algorithmic bias, ethical concerns and increasing inequality between the developed and developing countries. Regional frameworks, international organizations and major powers can play effective role in developing AI governance and regulatory policies. This study is significant because the omission of a integrated global regulatory framework has constructed the fragmented governance mechanism and has resulted in the increase of geopolitical competition between the major powers. This research uses qualitative research methodology based on analytical and descriptive approach. The data is collected through secondary sources such as academic journals, policy reports and official documents.

**Keywords:** Artificial Intelligence, Global Governance, AI Governance, International Relations, Cybersecurity, Geopolitical Competition, Ethical Challenges, AI Regulations

**Introduction**

AI is one of the important and fast-growing technology in the world. Initially, it was limited to machines and computers but now it is visible in every field. AI is used by governments for decision making, enhancing public services, updating security systems and even for policy making. AI is changing global governance and international relations. Ai is not limited to one country only, instead it effects on global level (Malik, et al., 2023). Every country uses AI according to their demand. Some countries use AI to strengthen their economy, some for military and security purposes and others for innovation and development. It has also become a power competition tool in global politics. Although AI is bringing significant changes but it also creates various problems. Cyber security is top notch threat where Ai system can be hacked and misused, another threat is misinformation and fake news which spread rapidly through Ai. It can also invade privacy through which data can be misused. AI algorithm can be biased and can increase discrimination.

Ai is the reason of global inequality. Developed countries consist of advance AI technology and resources than the developing countries. Due to inequality between developed and developing countries, the digital divide is increasing which also creates global power imbalance. Although AI is developing but it also creates inequality if cannot be controlled properly. There is no proper system to regulate AI at global level. Every country

is creating its own policies. Some countries use strict regulations while some uses flexible approach. But there is no unified international law, due to which global AI governance is fragmented and is not properly coordinated.

Some efforts are being made at international level. United Nations and some other international organizations are developing AI governance frameworks. But the problem is that all these systems are not connected with each other (Muzaffar & Choudhary, 2017). The gap of global coordination still exists. Another important angle is a race between major powers. Countries like US and China are using AI for their strategic power. The competition is in the field of economy military and technology, due to which countries focus more on competition than the cooperation which makes global governance difficult. In this situation it is very difficult to study AI. This research analysis how AI will change the global governance, what are the opportunities, what are the risks and if international system can be managed or not. If not, then what type of global governance framework is needed so that AI can be used safely, ethically and in a fair way?

### **Literature Review**

Artificial intelligence (AI) has a profoundly transformative effect on contemporary society, posing both serious risks and worthwhile opportunities. Keeping humans in charge of AI as it develops is a major concern. In order to ensure that opportunities are maximized, it is necessary to investigate the tools needed to effectively govern AI development. AI's vital role in tackling global issues has been highlighted by the COVID-19 pandemic, underscoring the necessity of creating a strong framework for its advancement. While taking into account new legislative measures targeted at future-proof solutions, this framework must draw from current laws. The key to this is developing a governance model that is based on the law, encourages democratic oversight, involves cooperation between all parties involved, and is validated by input from society and science (Muzaffar, et al., 2023). It is essential to apply ethical principles in AI design, using both new ex ante impact assessments in the early stages of development and ex post analyses of consequences. To protect fundamental rights and improve cybersecurity, it is also crucial to establish clear data use policies. To guarantee fair access to information and accountability, transparent rules governing the interactions between AI users and developers are required, especially through mechanisms encouraging "explainability." To properly implement different AI functionalities, risk assessments will be essential. Even in the face of political disagreements, reaching the required compromises between European institutions, stakeholders, and member states is essential. The search for these answers is difficult and brave; the COVID-19 pandemic has unexpectedly sped up the development of AI, showing possible future directions.

Batool, Zowghi and Bano (2025) provides an in-depth analysis and scholarly research on artificial intelligence governance and regulatory frameworks by examining how the governments, private institutions and international organizations respond to the rapid development of AI technologies. AI has become an essential issue of governance as AI influences politics, economic, security, and society intensively. AI increases the cyber security risk, other concerns such as accountability, transparency, ethical decision making, privacy protection and algorithmic bias. Current AI governance approaches in different countries and institutions are fragmented and inconsistent. Many states are developing national AI strategies but there is no unified global regulatory mechanism. For responsible AI development, international cooperation, ethical standards and multilateral governance frameworks are very important and significant. AI governance needs such balanced policies which promote innovation and also strengthen democracy human rights and minimize global security risks.

The report "Global approaches to AI governance: policy, legal, and regulatory perspectives" issued by United Nations development program examine that different countries and international organizations are developing regulatory frameworks and

policies for artificial intelligence governance as AI has become an important factor in economic growth, governance innovation and public administration, but this rapid advancement has created complex legal, ethical and security challenges (Muzaffar, et al., 2024). The study discusses different global approaches which are being used for AI regulation especially data privacy, accountability, transparency, algorithmic bias and human rights protection like issues are emphasized. There is no unified international framework due to which states have fragmented policies and uneven regulatory standards. To use AI technologies responsibly and in an ethical way international cooperation and inclusive government mechanism is very important. Regulatory frameworks are needed for effective AI governance to promote innovation as well as global security.

Zaidan and Ibrahim (2024) analyzes the growing challenges of artificial intelligence at international level. Authors argue that artificial intelligence is very important in the field of economics, efficiency and technological advancement but it also imposed cybersecurity threats, algorithmic bias, misinformation, autonomous weapons, and privacy violations. AI is a borderless technology so that national regulations are insufficient. Current global regulatory systems are fragmented due to competing interests of states, corporations and international organizations. International cooperation is important to enhance the transparency, accountability, and ethical governance. There should be a global AI regulatory authority to effectively tackle all the challenges. Without effective international legal and institutional frameworks, AI can create threats for global peace security and governance stability.

Ernan and Furendal (2024) analysis that the rise of artificial intelligence again affect the legitimacy and effectiveness of governance systems. The study argues that artificial intelligence influences political decision making, governance processes and public administration at national and international level. AI has the capacity to improve the governance efficiency and policy implementation but along with this it imposes serious concerns such as transparency, accountability, democratic participation, and human rights. If decision making processes become dependent on opaque algorithms and technological systems then it weakens the public trust. Developing countries have unequal access of AI technologies which reinforce the global inequalities in international politics and create a global power imbalance between the states. There is a need of ethical governance framework and democratic oversight to maintain the political legitimacy of global institutions for effective AI governance, transparency, accountability, inclusiveness and stronger international cooperation is very important (Batool et al. 2023).

Walter (2023) emphasizes the importance of development of Artificial Intelligence in global competition and major challenges face by international governance. AI has become a rapid tool of competition among major powers in the field of economy, politics and strategy. AI helps in innovation but it imposes serious threats at global level. Competitive nature of AI development pushes states towards technological advantages than the ethical and regulatory considerations. Fragmented national policies are insufficient to address the global implications of AI technologies. Coordinated international governance frameworks, multilateral cooperation and balanced regulatory frameworks are necessary to promote innovation.

Gill and Germann (2022) explore the relationship between Artificial Intelligence governance and the achievement of the Sustainable Development Goals (SDGs). The study argues that AI has the potential to support sustainable development by improving healthcare, education, environmental management, and economic growth. However, the authors also highlight that without proper governance and ethical standards, AI technologies may deepen social inequalities, discrimination, and digital divides. The article emphasizes the importance of normative and ethical frameworks in global AI governance, including transparency, accountability, and inclusiveness, fairness, and human rights

protection. The study further argues that international cooperation is essential to ensure AI contributes positively to global development objectives. Effective AI governance must combine technological innovation with ethical and policy frameworks to achieve inclusive and sustainable global development.

Nuga (2020) analyzes the rivalry between the major powers such as United States and China. AI has become an important strategic tool of economy, military power and technology which intensifies the competition among major powers. Both states invest heavily in AI developments to strengthen the global influence, national security and economic dominance. AI rivalry is reshaping the global governance structures and intensifying the geopolitical tensions. Lack of unified international regulations can deepen the strategic competition and can create risks related to surveillance, cybersecurity, autonomous weapons and technological inequality. International cooperation and balanced governance frameworks are important so that AI couldn't undermine the global stability and security.

Gil and German (2022) states the importance of artificial intelligence governance in achieving sustainable development goals. AI has provided various opportunities in healthcare, education, environmental, management and economic growth. By providing these opportunities, AI has the potential to improve the sustainable development. Without proper governance and ethical standards, AI technologies can deepen the discrimination, social inequalities and digital divides. The study emphasizes on the importance of ethical frameworks such as transparency, accountability, inclusiveness, fairness and human rights protection. International cooperation is very important to achieve AI development objectives and achieve a positive outcome. For achieving inclusive and sustainable global development, effective AI governance and technological innovation have to be combined with ethical and policy frameworks.

Christie, Ertan, Adomaitis and Klaus (2024) argues that artificial intelligence is also used in military systems. The use of artificial intelligence in military systems especially lethal autonomous weapons produce growing concerns. AI driven weapon systems impose serious challenges for accountability, transparency and international humanitarian law. As decision making become more automated, it becomes more difficult to explain how lethal actions are being taken which create ethical and legal concerns. The absence or lack of clear global regulations on autonomous weapons increases the risk of misuse, conflict escalation and less control of humans on military decisions. For more meaningful human control and ethical compliance in warfare, it is essential to ensure the stronger international cooperation and regulatory mechanism. The regulation of autonomous weapons is essential for regulating the global security and maintenance of humanitarian principles.

## **Material and Methods**

The method employed in the research is qualitative which is based on analytical and descriptive approaches as it is more theoretical, analytical and explanatory in nature. The qualitative approach is chosen to gain in-depth understanding on the rise of AI and transformation of global governance. The data is collected through secondary sources including books, academic journals, research articles, official documents and United Nations reports.

## **Results and Discussion**

The research locates that developed artificial intelligence is the result of globalization. Artificial intelligence is rapidly growing at international level. AI swiftly and briskly reshaping the global governance because it has become an important part of decision-making processes, security mechanism, public administration systems and international policy frameworks. AI is not limited to technology only, it has become a

strategic tool which influences governance style of states, their competition and cooperation. AI is shifting the human centered governance toward data driven and algorithm-based systems. This increases the efficiency as well as accountability and control concerns. AI provides various opportunities for global governance along with risk and ethical challenges. On positive side, AI promotes innovations, improves healthcare systems, enhance economic productivity, improve public services and help in the achievement of the sustainable goals. If AI could be used and properly managed, it can become a strong tool of development. On the other side, AI also creates ethical concerns such as cybersecurity threats, misinformation, privacy violations and algorithm bias. These all issues combined together impose serious challenges on governance systems. The positive and negative outcomes of AI shows that it is not a neutral technology instead it changes power and influence as well.

The research finds that the AI global governance is highly fragmented because there is no unified international regulatory framework. All countries develop their own AI policies based on their national interests such as national security, economic growth and technological development. The coordination at global level is difficult due to fragmentation and it became difficult to handle cross border AI issues. International organizations such as United Nations suggest ethical guidelines to promote cooperation but there is omission of binding global law which can help regulate AI properly. The research encounters that ethical and human rights issues have become an important part of AI governance. AI systems are mostly opaque which means decision making processes cannot be explained properly. This creates challenges such as transparency and accountability issues which weakens the public trust AI can also create biased decision if data and algorithm is not fair and biased, which results in the increase of inequality and discrimination. This is why ethical governance framework is very crucial which protects the human rights, transparency and fairness.

The research also finds that AI has become an important and significant part of global geopolitical competition among major powers such as United States and China. Both countries are using AI in the field of economy, military and global influence. This shows that AI is not the tool of developments but AI has also become an instrument of politics. AI race increases the international tensions and weakened the global cooperation which make the governance complex. Regional governance models especially AI act of European Union is an important step in the direction of AI regulation. EU has introduced risk-based approach where AI systems are categorized according to their risk which focuses on transparency, accountability and ethical compliance. These models help to structure governance and their impact is limited on global level as AI is a borderless technology and it affects every country. AI also creates security risk especially in the field of military technologies and autonomous weapons. These systems reduce the human control and shift the warfare decisions to the machines. This increases the ethical, humanitarian and legal concerns. Existing international laws are not sufficient to regulate the AI technology properly. Lack of string regulations increases the risk of misuse, cyber warfare and conflict escalation, so that international cooperation is necessary.

Overall, the research finds that international cooperation is very important to manage AI governance effectively. AI is borderless technology. No single country or regional system can control AI on their own. Lack of coordinated global framework will intensify AI global inequality, geopolitical rivalry and international security.

## **Conclusion**

This study concludes that artificial intelligence is fundamentally changing the functioning and structure of global governance. It reshapes the international relations, decision-making processes and policy frameworks. AI has become a powerful force which provides numerous opportunities to improve the public administration, economic development and healthcare systems. Beside these opportunities it creates serious

regulatory, ethical, security and political challenges which cannot be ignored. Analysis shows that the current global governance system is not fully equipped to handle the rapid and borderless expansion of AI. Governance structures are fragmented due to the lack of unified international regulatory framework and increases the geopolitical competition among major powers. Lack of coordination weakens the ability of international system to tackle the cybersecurity threats, misinformation, algorithm bias, privacy violations and autonomous weapons. AI is not only technological issue but also a strategic and political issue which is deeply linked with the global power dynamics. AI competition has increased the international tensions and reduced the changes of collective cooperation among major powers. Along with this, ethical concerns such as transparency, accountability, and fairness and human rights protection are the central part of AI governance debate. Overall, the study concludes that strong international cooperation, inclusive global institutions and ethical regulatory frameworks are crucial for sustainable AI governance. If coordinated global approach is not improvised, it can increase AI global inequalities, security risks and make the international system more fragmented. So that a comprehensive and unified global governance mechanism is essential to ensure the international cooperation.

### **Recommendations**

- There should be unified international AI governance framework under the leadership of United Nations to implement rules effectively on global level. AI is a borderless technology; only national policies alone are not enough. This is why global regulatory system is important to ensure the coordination and consistency between the countries.
- International cooperation among countries should be strengthened especially between major powers to lower the geopolitical competition in the field of artificial intelligence. Collaborative agreements in AI development, military use and data sharing can reduce tensions and improve global stability.
- Strict ethical guidelines should be developed for AI systems to ensure transparency, accountability, fairness and human rights protection. AI algorithm should be more explainable so that decision making processes should not be hidden and biased. This will increase public trust on governance.
- Another recommendation is that developing countries should be provided with technology, funding and capacity building to reduce the digital divide. Unequal access to AI will increase the global inequality.
- Strong regulations should be introduced for high-risk AI application, especially autonomous weapons and military systems. Human control should always be maintained on critical decisions in warfare to ensure the following of international humanitarian law.
- Continuous global dialogue between states, international organizations, private companies and civil society should happen to ensure the safe, beneficial and ethical AI development.
- Investment should be increase un the field of AI education and digital literacy at global level. Institution, citizens and policymakers should have proper understanding about AI to make informed decisions and reduce the misuse and manipulation
- Regional AI governance framework such as European Union should be used as reference model. These frameworks should be harmonized at global level to avoid fragmentation between countries and policy remains consistence.
- Strong cyber laws and international cybersecurity should be implemented to control misinformation and protect the democratic systems.
- Formation of global AI monitoring and coordination body should be improvised under the international institutions. These should supervise the AI developments, assess the

risk and ensure the compliance of agreed ethical and legal standards. This body can play the role of central platform in reporting, escalation and dispute resolution.

**References**

- Batool, A., Asmat, K., & Muzaffar, M. (2023). Governance and Transparency: A Case of Pakistan. *Annals of Human and Social Sciences*, 4(3), 846–856. [https://doi.org/10.35484/ahss.2023\(4-III\)78](https://doi.org/10.35484/ahss.2023(4-III)78)
- Batool, A., Zowghi, D., & Bano, M. (2025). AI governance: a systematic literature review. *AI and Ethics*, 5(3), 3265-3279.
- Board, C. E. (2024). United nations system white paper on ai governance. *Policy*.
- Cancela-Outeda, C. (2024). The EU's AI act: A framework for collaborative governance. *Internet of Things*, 27, 101291.
- Christie, E. H., Ertan, A., Adomaitis, L., & Klaus, M. (2024). Regulating lethal autonomous weapon systems: exploring the challenges of explainability and traceability. *AI and Ethics*, 4(2), 229-245.
- Erman, E., & Furendal, M. (2024). Artificial intelligence and the political legitimacy of global governance. *Political Studies*, 72(2), 421-441.
- Gill, A. S., & Germann, S. (2022). Conceptual and normative approaches to AI governance for a global digital ecosystem supportive of the UN Sustainable Development Goals (SDGs). *AI and Ethics*, 2(2), 293-301.
- Malik, A., Yaseen, Z., & Muzaffar, M. (2023). Governance in Pakistan: A Case Study of Pakistan Muslim League-N, *Journal of Politics and International Studies*, 9(2), 35–49
- Muzaffar, M. & Choudhary, S. (2017). Human Development and Democratic Governance: An Analysis, *Orient Research Journal of Social Sciences*, 2(1), 71-94
- Muzaffar, M., Fern, Y. S., & Yaseen, Z (2024). Good Governance and Citizen's Trust in Pakistan: A Moderation Effect of Unethical Behavior, *Asian Journal of Human Services*, 26, 91-108 [https://www.jstage.jst.go.jp/article/ajhs/26/0/26\\_91/\\_article/-char/en](https://www.jstage.jst.go.jp/article/ajhs/26/0/26_91/_article/-char/en)
- Muzaffar, M., Fern, Y. S., & Yaseen, Z. (2023). Governance Dilemma: A Way Forward For Third World States, *Journal of Research Administration* 5(2), 9792-9803
- Nuga, J. (2020). US-China strategic competition on the artificial intelligence frontier: a comparative approach. *Available at SSRN 3619381*.
- 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(1), 14.
- Zaidan, E., & Ibrahim, I. A. (2024). AI governance in a complex and rapidly changing regulatory landscape: A global perspective. *Humanities and Social Sciences Communications*, 11, 1121