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ALGORITHMIC IMPACT ASSESSMENT (AIA) AND THE FUTURE OF AI REGULATION IN BANGLADESH: CHALLENGES, GLOBAL MODELS, AND LEGAL REFORMS

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I. ABSTRACT

The application of artificial intelligence (AI) has revolutionised the healthcare sector, finances, and even the police, yet it also leads to numerous risks, including discrimination, breach of privacy, and biased judgment. Algorithmic Impact Assessment (AIA) is one of the tools that is used to manage these risks. AIA is an approach that contributes to assessing and reducing the possible damages of AI systems in advance and after their activation as well. This research paper delves into the issue of AIA in the regulatory setup of Bangladesh. Bangladesh, similarly, to other nations, has experienced more of the usage of AI, but it does not have a formal framework through which the technologies may be controlled. The paper will use global models of regulation over AI, as exemplified by the European Union (EU), the United Kingdom (UK), and Canada, to suggest a framework that could be used to implement AIA in Bangladesh. The study reveals that embracing AIA in Bangladesh has the potential to minimise the risks that AI has on the rights of citizens and encourages equity in decision-making. The paper has a conclusion where it suggests that it is necessary to establish a National AI Regulatory Authority, create a standardised AIA framework, and establish public-private collaboration to ensure ethical development of AI in Bangladesh.

II. KEYWORDS

Algorithmic Impact Assessment (AIA), Artificial Intelligence (AI), AI Regulation, Bangladesh, Risk Management

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III. INTRODUCTION AND RESEARCH PROBLEM

A. Introduction

Artificial Intelligence (AI) is an influential technology that is changing numerous sectors, including medicine and finance, not to mention the police. Its AI systems can handle high volumes of data and come up with decisions and even forecast future results. These functionalities have seen AI become an imperative application in enhancing efficiencies and services. Nonetheless, the fast development of AI is accompanied by some challenges. Artificial intelligence (AI) is prone to biased decisions, privacy invasion, or other causes of harm to a person or society.[3]

In this perspective, as AI is carried out in key areas, it is becoming necessary to have proper regulation so that the application of AI can be ethical. This is the point of Algorithmic Impact Assessment (AIA). AIA is a technique that examines risks of use of AI systems before their use and tracks their effect after they are used. It assists in determining any adverse outcomes of AI on the rights, safety, privacy, and fairness of people.[4]

AIA was already incorporated in the laws of countries such as the European Union, the United Kingdom and Canada. These countries have realised that AI can cause immense harm unless managed by the relevant authority. It is, however, sad that Bangladesh has failed to come up with a strong legal protocol to regulate AI. Despite AI being used in numerous industries, there are no specific laws/policies in the country that should be used to make sure the AI systems are developed and rolled out in an ethical manner.

B. Research Problem

The major problem with Bangladesh is that no specific regulations and rules exist to govern the AI systems, especially dangerous AI systems, which can impact the lives of individuals. Even though some legislation does deal with legislation dealing with digital security laws, such as the Cyber Security Ordinance 2025 (approved 6 May

[3] Mutambara AGO, *Artificial Intelligence: A Driver of Inclusive Development and Shared Prosperity for the Global South* (CRC Press 2025)
[4] Kelly-Lyth A and Thomas A, *Algorithmic Management: Assessing the Impacts of AI at Work* (2022)

2025; gazetted 21 May 2025), the legislation also only deals with some of the AI-enabled cybercrimes, but does not effectively and fully deal with the entire breadth and scope of ethical and governance challenges related to AI systems- especially algorithmic accountability, transparency and impact assessment. This is leaving the country vulnerable to the absence of any threats in the aspect of controlling AI.[5]

The difficulties that Bangladesh faces in its implementation of AI regulations include the inadequate infrastructure, a shortage of specialists in implementing AI regulations, and poor knowledge among the citizens of the dangers of AI. Besides, the country does not have a regulatory body that particularly manages AI technologies. This situation makes it hard to control the effect of AI and predetermines safe and even-handed usage of these technologies.

An answer to this issue is the fact that, in Bangladesh, the introduction of Algorithmic Impact Assessment (AIA) alleviated the situation. AIA can be used to recognise risks, make AI systems transparent, and hold people accountable for the use of AI systems.[6] The paper aims to investigate how AIA can address AI risks in Bangladesh, including the way this institution can become a part of the legal and regulatory environment of this country.

C. Research Objectives

The key aims of this investigation will be to determine the application of the Algorithmic Impact Assessment (AIA) in controlling AI systems, determine the existing level of AI regulation in Bangladesh, suggest an AIA implementation framework, and estimate the challenges and opportunities of this tool.

1. **To examine the role of AIA in the regulation of AI:**

The proposed study will explore the potential of Algorithmic Impact Assessment (AIA) as a tool to control AI systems. AIA can be applied to make sure that AI technologies are responsible and ethically utilized. The paper will discuss how the

[5] Pehlivan CN, Forgó N and Valcke P. *The EU Artificial Intelligence (AI) Act: A Commentary* (Kluwer Law International BV 2024)
[6] Novelli C, Taddeo M and Floridi L, "Accountability in Artificial Intelligence: What It Is and How It Works" (2023) 39 AI & Society 1871 https://doi.org/10.1007/s00146-023-01635-y

concept of AIA can be used to determine and address the risk of bias, breach of privacy, and unfair decision-making in AI systems. Specifically, it will pay attention to such sectors as healthcare, finance, and law enforcement, where the influence of AI on human beings and society plays a big role. The objective is to realise how AIA can be an intermediary, to make sure that AI systems behave in a manner that is ethical and does not violate human rights.

2. **To determine the situation with the regulation of AI in Bangladesh:**

The other goal is to assess the situation with AI regulation in Bangladesh. The study will also review the available policies, including the Cyber Security Ordinance 2025, to determine the current state of the regulatory process of AI in the country. Nevertheless, it will also point to the weaknesses of the current framework, which is the lack of explicit rules concerning the ethical risks of AI. Conducting this identification will demonstrate the need for the introduction of AIA to control AI risks and ensure that AI technologies are used in a manner that would not endanger the rights and safety of the population. Sub-section will underscore how extensive AI regulations must be to promote fairness, transparency, and accountability.

3. **To suggest a framework for the implementation of AIA in Bangladesh:**

This study will recommend a system of implementing AIA in Bangladesh, based on the best practices in AI regulation across the world. This framework will be adapted to the specific issues of the country, such as infrastructure restrictions and the necessity to have professional knowledge of AI governance. The study will use examples of such countries as the European Union, the United Kingdom, and Canada, which have already adopted AIA, to suggest an effective and practical model to Bangladesh. The objective is to make sure that AI systems in Bangladesh are safe, open, and just, and at the same time make AI developers responsible.

4. **To assess the issues and possibilities to implement AIA:**

The study will evaluate the issues to be encountered by Bangladesh in embracing AIA. This is in terms of technical constraints, including the absence of infrastructure, the inability to be regulated, and implementation problems. The study shall also find out the opportunities that AIA will have in Bangladesh, including gaining the confidence

of the population on AI, ethical development, and sustainable AI practices.[7] It aims to give a perspective on the positive and negative issues of introducing AIA in the country.

D. Research Questions

The following are the research questions that will be answered:

1. What are the benefits of introducing AIA into the AIs regulation in Bangladesh?
2. What are the options to incorporate Algorithmic Impact Assessment (AIA) into the changing legal and policy context of Bangladesh (e.g., the Cyber Security Ordinance 2025, draft National AI Policy 2024, and national strategies on the same)?
3. What are the issues that are encountered by Bangladesh in the implementation of AIA, and how can they be solved?

E. Research Hypotheses

It is theorised that the subsequent hypotheses hold:

1. Algorithms Impact Assessment (AIA) applied in Bangladesh will decrease the risks of high-risk AI systems to a significant level, particularly in critical industries and in healthcare, finance, and police. AIA will make sure that these AIs are subjected to thorough tests before implementation to enable any risks to be predetermined and solutions to be put in place. Moreover, AIA will help monitor AI systems during their functioning regularly, discover, and solve any unpredictable problems that may occur during practice.
2. A National AI Regulatory Authority will be established in Bangladesh, along with AIA, which will enhance the transparency, accountability, and equity of the AI systems. This government agency would control the process of creating and implementing AI technologies and make sure that they are employed in a manner that is ethically and in a way that serves the best interests of the population. Through regulation standards, the authority will assist in

[7] Kyriazoglou J, *AI Management Framework: Practical Solutions for Ethical AI Deployment and Continuous Improvement* (Springer Nature 2025)

safeguarding citizens' rights and establish trust among people in the AI systems so that these technologies can be established and utilised with a high degree of accountability.

F. Research Methodology

The study uses the qualitative method to examine how the Algorithmic Impact Assessment (AIA) contributes to AI regulation in Bangladesh. The methodology is based on a comparative analysis and case study analysis to realize how AIA was applied in the world and how it might be applied to the Bangladeshi context.

1. Comparative Analysis:

The study starts with comparing the regulatory frameworks of AI in the USA, the European Union (EU), and the United Kingdom (UK). These are areas that have managed to incorporate AIA in the AI governance mechanism. The study will help in determining the best practices and strategies that can be implemented in Bangladesh by examining its laws as well as its policies. This parallel will be over the way AIA has been applied in controlling the high-risk AI systems and making them capable of being fair, transparent, and accountable.

2. Case Studies:

Leading critical industries, including healthcare, finance, and law enforcement, are also included through research using an AIA case study analysis to determine how AI systems have been legitimised using AIA. The case studies will contain actual examples of risks associated with AI and how such problems can be addressed using AIA. In this way, the study will also help bring out the practical advantages and burdens of using AIA to manage AI risks.

3. Data Sources:

The primary sources used in this study are scholarly articles and primary legal/policy documents, which were analysed between 2021 and November 2025. Specifically, the draft national AI Policy 2024 and the national report of the UNESCO AI Readiness Assessment (RAM) (published November 2025), which is among the chosen ones in Bangladesh, are compared with the selected international tools (EU, UK, Canada). The

interviews with stakeholder AI professionals were not applicable to this version of the manuscript; this restricts the possibility of taking industry-specific viewpoints of implementation and should be remedied in future research in the form of purposive sampling and reporting of interview procedures.

G. Literature Review

The Literature Review dwells on AI regulation across the globe, the present scenario of AI regulation in Bangladesh, and the issue of difficulty in the enforcement of AI regulations. This will also assist in presenting the significance of Algorithmic Impact Assessment (AIA) to regulate AI.

IV. AI REGULATION GLOBALLY

1. **The European Union (EU) AI Act:** This (EU) regulation (2024/1689) took effect on 1 August 2024. It has a timetable of implementing: prohibited AI practises will start to apply on 2 February 2025; tentative rules governing the governance of general-purpose AI models will apply on 2 August 2025; the vast majority of the provisions will apply on 2 August 2026; some rules on high-risk AI (in particular, integrated into regulated products) will have a longer transition period, until 2 August 2027. Notably, the EU AI Act does not impose an Algorithmic Impact Assessment per se, but it includes other matters which, functionally, are equivalent to an AIA approach: a risk management system, data governance, technical documentation, transparency obligations, human oversight, post-market monitoring, and (in most high-risk systems), conformity assessments.[8]
2. **United Kingdom (UK):** The Artificial Intelligence (Regulation) Bill is a good example of a bill that is regularly referenced in the UK setting and is a Private Member Bill (introduced again in the House of Lords on 4 March 2025) and has not yet become statutory law. To this effect, it should be viewed as a recommended framework, and no longer than a regulation. Practically, the UK today uses a principles-based, non-Seat approach to AI governance, where sector regulators (e.g., the Information Commissioner's Office, Financial Conduct Authority, and

[8] "Regulation - EU - 2024/1689 - EN - EUR-LEX" https://eurlex.europa.eu/eli/reg/2024/1689/oj/eng

Ofcom) charge AI systems with the existing legal obligations (e.g., data protection, consumer protection, and safety rules).[9]The UK Artificial Intelligence (Regulation) Bill, in case it is adopted, would mandate AI systems operating in sensitive sectors (i.e., in the fields of healthcare and criminal justice) to comply with certain requirements on governance and accountability, including AIA-like duties. The Bill is preoccupied with clarification, responsibility, and transparency of AI technologies, and it would compel developers to reveal system functionality, decision-making, and harm possibilities- an attitude that is preoccupied with human control and application of AI in ethical use.

3. **Directive on Automated Decision-Making in Canada:** The Canadian Directive on Automated Decision-Making offers administrative departments the opportunity to undertake an Algorithmic Impact Assessment (AIA) of automated decision systems employed when making administrative decisions. After the fourth review, amendments became effective on 24 June 2025, imposing new requirements of testing and monitoring (including the bias-related controls), data governance and transparency, including what is expected to be publishable under AIAs before a system is launched, and findings of peer review, where appropriate, are published.[10]Automated Decision-Making Directive in Canada requires the government agencies to adopt AIA when using AI systems to make decisions affecting large numbers of people. It ensures equality, non-discrimination, and openness, particularly in social services and immigration. The Directive focuses on the fact that, in addition to constant monitoring, open consultations should be held to make AI systems responsible.[11]

V. AI REGULATION IN BANGLADESH

No complete single AI legislation has been passed in Bangladesh yet. Nevertheless, the AI governance agenda is changing based on various endeavours. These are the

[9] Barfield W and Pagallo U, *Research Handbook on the Law of Artificial Intelligence: Current and Future Directions* (Edward Elgar Publishing 2025)

[10] Secretariat TB of C, "Directive on Automated Decision-Making" (*Canada.ca*, June 24, 2025) https://www.tbs-sct.canada.ca/pol/(S(5xos1g45ufdaaz45lxatyqms))/doc-eng.aspx?id=32592

[11] Secretariat TB of C, "Guide on the Scope of the Directive on Automated Decision-Making" (*Canada.ca*, 24 June 2025) https://www.canada.ca/en/government/system/digital-government/digital-government-innovations/responsible-use-ai/guide-scope-directive-automated-decision-making.html

proposed governance structures (comprising a steering mechanism of ethical AI oversight), the National Strategy for Artificial Intelligence (a policy document containing six strategic pillars, including ethics, data privacy, security and regulations), and the UNESCO AI Readiness Assessment Methodology (RAM) process introduced in July 2024, whose national report was released in November 2025 and recommends in detail on rights-based AI governance. Simultaneously, the Cyber Security Ordinance 2025 directly refers to AI-enabled cybercrimes, yet it fails to offer an extensive model of accountability and transparency, along with evaluation of impacts by the sector.[12]

A. Challenges in AI Regulation

1. Lack of Infrastructure:

The absence of an infrastructure to facilitate AI governance is one of the obstacles to AI regulation implementation. Regulating AI systems in Bangladesh is not possible without sufficient technical infrastructure and resources, since it is not easy to carry out AIA assessments.[13]

2. Limited Expertise:

The other difficulty is the lack of experience in AI governance. The professionals needed to develop and enforce applicable rules, such as AIA, are not available since Bangladesh does not have professionals trained in AI technologies and legal frameworks.[14]

3. Resistance to Regulation:

Even the regulation of the AI industry is being met with resistance, with numerous developers looking at regulations such as AIA as hurdles to innovation. The solution

[12] Cyber Security Ordinance 2025 (Bangladesh Gazette, 21 May 2025)
[13] Babu K-E-K, "Artificial Intelligence, Its Applications in Different Sectors and Challenges: Bangladesh Context," *Advanced sciences and technologies for security applications* (2021) https://doi.org/10.1007/978-3-030-88040-8_4
[14] Mitchell M, *Artificial Intelligence: A Guide for Thinking Humans* (Farrar, Straus and Giroux 2019)

to this resistance is in emphasising the long-term benefits of regulation, i.e., creating public trust and fostering sustainable development of AI.[15]

Bangladesh can gain from the international examples of AIA in its creation of AI regulations. Even though Bangladesh has such problems as the insufficiency of infrastructure and the shortage of expertise, AIA can contribute to ensuring the ethical and transparent use of AI systems.[16] The challenges can be resolved by implementing AIA, which would help Bangladesh deal with the risks of AI technologies.

VI. RESEARCH & ANALYSIS

A. Importance of AIA in AI Regulation

One of the tools used is the Algorithmic Impact Assessment (AIA), which aids in the measurement of risks linked with AI systems prior to and following the implementation. With the increasing application of AI to critical industries (healthcare, finance, and law enforcement), it is imperative to address the question of whether such systems have been applied responsibly and ethically. The AI systems can be very harmful unless they are controlled, such as being biased in making their decisions, breaching privacy, or treating an individual or a group of people unjustly.

AIA can be used to mitigate these risks by systematically assessing the damages of AI systems. As an example, to illustrate, in medical practice, AI devices that are utilised to monitor diseases or suggest treatment may not target specific populations but result in discriminatory results.[17] AIA will take care of addressing such biases before the implementation of the AI to avoid causing harm to patients and the general population. In much the same way, AI algorithms for credit or lending or for scoring credit might discriminate against the poor or the marginalised. With the application

[15] Babu KEK, "Artificial Intelligence in Bangladesh, Its Applications in Different Sectors and Relevant Challenges for the Government: An Analysis" (2021) 7 International Journal of Public Law and Policy 319 https://doi.org/10.1504/ijplap.2021.118891

[16] Buijsman S, "Transparency for AI Systems: A Value-Based Approach" (2024) 26 Ethics and Information Technology https://doi.org/10.1007/s10676-024-09770-w

[17] Zhang J and Zhang Z-M, "Ethics and Governance of Trustworthy Medical Artificial Intelligence" (2023) 23 BMC Medical Informatics and Decision Making 7 https://doi.org/10.1186/s12911-023-02103-9

of AIA, these problems could be identified and eliminated, which favoured fairness and transparency.[18]

In law enforcement, where AIs are employed in predictive policing or face recognition, AIA can help resolve the issue of privacy and possible racial profiling. Social inequalities can be reinforced using AI systems that are based on biased data, and that may result in discrimination against the practice. Since they need an AIA, such systems can be carefully vetted against criticism and bias before their implementation in the real world.[19]

Identifying risks is not the only thing in AIA, but it also encompasses the implementation of mitigation measures for the risks. This involves robustness and transparency testing of AI models, accountability of its decisions by the AI, and continuous monitoring to verify its adherence to ethical principles. Finally, AIA holds the AI systems to be compatible with the values of society, safeguard human rights, and advance social good.

B. Global Models of AI Regulation

Various nations and territories have already established AIA and some other regulations that guarantee the intelligent application of AI systems. The European Union (EU), the United Kingdom (UK), and Canada have come up with regulatory frameworks that offer meaningful lessons on how AIA can be applied to address AI risks.[20]

1. The European Union (EU) AI Act:

No complete single AI legislation has been passed in Bangladesh yet. Nevertheless, the AI governance agenda is changing based on various endeavours. These are the proposed governance structures (comprising a steering mechanism of ethical AI oversight), the National Strategy for Artificial Intelligence (a policy document

[18] Micklitz H-W and Sartor G, "Compliance and Enforcement in the AIA through AI" (2024) 43 Yearbook of European Law 297 https://doi.org/10.1093/yel/yeae014

[19] Heisler N and Grossman MR, *Standards for the Control of Algorithmic Bias: The Canadian Administrative Context* (CRC Press 2023)

[20] Richter T and Artzt M, *International Handbook of Blockchain Law: A Guide to Navigating Legal and Regulatory Challenges of Blockchain Technology and Crypto Assets* (Kluwer Law International BV 2024)

containing six strategic pillars, including ethics, data privacy, security and regulations), and the UNESCO AI Readiness Assessment Methodology (RAM) process introduced in July 2024, whose national report was released in November 2025 and recommends in detail on rights-based AI governance. Simultaneously, the Cyber Security Ordinance 2025 directly covers AI-enabled cybercrimes but fails to offer a framework of algorithmic accountability, transparency, and impact analysis in the sectors in general.

The EU strategy of AI regulation pays much attention to the protection of basic rights. In another point, the EU AI Act demands that high-risk AI systems be monitored continuously once deployed to make sure that they do not cause harm or infringe on the rights of individuals. This proactive model of AI control that involves periodic evaluation and monitoring is one model that can be followed by Bangladesh in the regulation of AI.

2. United Kingdom (UK):

Artificial Intelligence (Regulation) Bill is their commonly used Bill in the UK environment, a Private Member's Bill, which was secondarily introduced in the House of Lords on 4 March 2025, and is yet to become law. Therefore, this should be seen as a draught design as opposed to set rule. As a matter of fact, it is now being implemented in the UK by a non-statutory principles-based approach to the governance of AI, with sector regulators (e.g., the Information Commissioner Office, Financial Conduct Authority, and Ofcom) using existing legal obligations (e.g., data protection, consumer protection, and safety regulation) in relation to AI systems.

The UK AI Regulation Bill has a different approach to the regulation of AI, but it has a lot in common with the EU one. The UK prioritises the promotion of innovation, but in a way that AI systems are applied responsibly. The Bill focuses on openness, equity, and responsibility of AI systems, particularly when applied in critical areas. It demands that AI developers perform risk evaluations before their systems are

implemented, and to reveal the information and models involved in decision-making.[21]

Besides the AIA, the AI regulation bill in the UK also emphasises the need to have human control of AI systems. That way, although AI technology may have been introduced, humans will intervene in any way to give a second check to the decisions of the system, which, in certain contexts, such as law enforcement and health care, is sensitive. The Bill stipulates that AI systems also undergo assessments on a regular basis and are updated to keep them ethical and in line with current changes. Such practice promotes AI innovativeness and responsible use.

3. Automated Decision-Making Directive in Canada:

The Directive on Automated Decision-Making in Canada compels the federal departments to have an Algorithmic Impact Assessment (AIA) that is completed on automated decision systems that are applied in governmental decisions. Amendments on, among others, testing and monitoring (including bias-related controls), data governance, and transparency followed the fourth review, which came into effect on 24 June 2025, with inter alia strengthened requirements around the publication of AIAs (before the launch of a system) as well as the publication of peer review results (where appropriate).

The Directive on Automated Decision-Making in Canada demands that the federal departments assess Algorithmic Impact (AIA) of the automated decision systems applied in the administrative decisions. Amendments on, among others, testing and monitoring (including bias-related controls), data governance, and transparency followed the fourth review, which came into effect on 24 June 2025, with inter alia strengthened requirements around the publication of AIAs (before the launch of a system) as well as the publication of peer review results (where appropriate).

Another issue the Directive is interested in is the participation of citizens in the process of AI governance. According to it, the citizens are to be informed about the application

[21] Moreno N, "The Artificial Intelligence (Regulation) Bill: Closing the UK's AI Regulation Gap?" (*Kennedys Law*, 7 March, 2025) https://www.kennedyslaw.com/en/thought-leadership/article/2025/the-artificial-intelligence-regulation-bill-closing-the-uks-ai-regulation-gap/

of AI to the government process of making decisions and providing feedback regarding it. A strategy that is participatory like this will ensure that the AI systems are developed and used in a way that corresponds to a societal interest. The Canadian model implies that one needs to track the advancement of the AI systems and conduct regular reviews to ensure that the AI systems are ethical.

C. Implementing AIA in Bangladesh

Bangladesh has yet to establish an early system of AI regulation, but it is not going to begin at ground level. The current campaigns include the draft National AI Policy 2024, the National Strategy for Artificial Intelligence, the UNESCO RAM process, and AI-related sections in the Cyber Security Ordinance 2025, all of which provide an opening for AIA to be officially introduced. However, the internationalisation of AIA in the sector will have challenges and will demand a remarkably close localisation of international best practices in local contexts.

1. Legal and Institutional Environment:

The establishment of a National AI Regulatory Authority is one of the recommendations in the creation of AIA in Bangladesh. This body would oversee developing and implementing AI systems, which should be ethically sound. The authority would also have a mandate to carry out regular auditing of AI, as well as the implementation of AIA of all high-risk AI systems.

2. The Infrastructure and Capacity Building:

Bangladesh experiences limitations to technical infrastructure and expertise specialisation in AI governance now. The country must strive to establish the technical infrastructures to roll out the regulation of AI, which includes the establishment of the tools and the platform where the work of AIA is to be conducted. Also, AI governance requires human capacity to be trained through the education of legal professionals, policymakers, and AI developers. Since it will create courses and platforms of

education concerning the issue of AI ethics and regulations, a pool of specialists who would adequately manage the risks associated with AI will be developed.[22]

3. **Public awareness and inclusive stakeholder engagement:**

The effective introduction of AIA in Bangladesh will require the ordinary people to be educated about the risks and opportunities of AI. The information about AI ethics and why people should be regulated will enable the establishment of trust in AI systems in the community and get people on board with AI governance programs. Involving the citizens in AI regulation development will contribute to the problem of making sure that the regulatory framework is a reflection of the interests of the people and their values.[23]

4. **Realignment of Global Paradigm with Bangladesh:**

Bangladesh can benefit from the models set by other countries, but this has to be adapted to local problems. Indicatively, AIA requirements need to be localised, based on the local environment, such as the socio-economic situation and limitations of infrastructure. The first step that Bangladesh can take is a pilot project to apply AIA to one sector of Bangladesh, including healthcare or finance, and expand the elements as the regulatory framework is developed.

D. The Role of a National AI Regulatory Authority

To regulate the practice of AIA in Bangladesh, it is important to establish a National AI Regulatory Authority. This authority would deal with setting standards on the development of AI and making sure that all AI systems are regularly evaluated to determine the risks.

1. **Regulatory Oversight:**

The regulatory body would oversee creating AI policies and ensuring that the AI systems do not promote unethical practices. It would also help give the AI developers the right direction, such that they go through the right procedures in conducting AIA.

[22] Hoffmann CH and Bansal D, *AI Ethics in Practice: Navigating Academic Insight, Managerial Expertise, and Philosophical Inquiry* (Springer Nature 2025)
[23] Floridi L, *The Ethics of Artificial Intelligence: Principles, Challenges, and Opportunities* (Oxford University Press 2023)

This involves coming up with specific guidelines that the developers of AI should apply during the AIA and the assessment factors to be taken into consideration.

2. **Monitoring and Enforcement:**

When the AI systems are deployed, the authority will be tasked with monitoring the systems to ensure that they remain ethical in their work. This would entail periodical audits, fairness and transparency, accountability checks, and ensure that AI systems would not harm an individual or society. In the event of the identification of any problems, the authority would have a mandate to intervene and take remedial measures.

3. **This involves involvement and awareness of the populace:**

The regulatory body ought to communicate with the citizens to sensitise them on AI and its effects. It must also cooperate with the universities, research centres, and international organisations so as to remain informed of the global AI trends. They should conduct public consultations to get input on AI policies that are not concealed and that the regulatory framework is acceptable to the requirements of society.[24]

VII. SUGGESTIONS AND RECOMMENDATIONS

In accordance with the research findings and the analysis, the following recommendations can be provided to ensure the successful implementation of Algorithmic Impact Assessments (AIA) in Bangladesh and create a full-scale regulatory framework of AI.

1. **Make a commitment to UNESCO Recommendation on the Ethics of Artificial Intelligence:** Bangladesh is a signatory to the UNESCO Recommendation on the Ethics of AI (2021) and enforcing it requires the RAM process. Any AIA framework in the country must be in line with these principles (human rights, inclusion, accountability, transparency) and rely on the recommendations of the RAM to be a roadmap towards implementation.[25]

[24] Susskind RE and Susskind D, *The Future of the Professions: How Technology Will Transform the Work of Human Experts* (Oxford University Press 2023)
[25] "Recommendation on the Ethics of Artificial Intelligence" (*UNESCO*, September 26, 2024) https://www.unesco.org/en/articles/recommendation-ethics-artificial-intelligence

2. **Consider linguistic and cultural factors:** The templates and governance advice of the AIA must clearly necessitate assessing linguistic and cultural aspects, such as the existence of datasets in Bangla, and protection of the lively and culturally varied language (and ethnic heterogeneity) to ensure that AI applications can capture the multilingual and multicultural nature of Bangladesh.
3. **Implement in phases and pilot projects:** Bangladesh can start with pilot AIA programmes in key high-impact areas (e.g., healthcare, finance, social protection, or law enforcement) and refine the framework to some extent, developing institutional capacity, and expanding slowly using learning.
4. **Establish a National AI Regulatory Authority:** Bangladesh should establish a National AI Regulatory Authority as a priority. Such a body would deal with the development and implementation of AI systems in the country. Regulation of AI, regular audits, and maintenance of ethical standards should be within the power of the authority. This regulatory agency might also have the mandate of AIA of high-risk AI systems and satisfy the transparency, fairness, and accountability standards before their deployment.
5. **Establish a Standardized AIA Structure:** Bangladesh needs to implement a standardised AIA model based on international best practices, including the EU and UK. Such a framework must include the processes of carrying out AIA with the evaluation of the risk of bias, discrimination, and breach of privacy. The framework must also contain specifications of the methods of ensuring that there are human control and transparency in the AI decision-making. A standardised framework would help bring some form of consistency and clarity in the sense that the evaluated AI systems are assessed similarly.
6. **Construct Capacity and Infrastructure:** Bangladesh must invest in the development of the infrastructure needed to regulate AI to conduct AIA successfully. This entails coming up with technical tools to analyse the AI systems, creating platforms where the AIA can be carried out, and the ability to share the information to ensure transparency. Also, Bangladesh should invest in the capacity-building initiatives of professionals in AI governance.

Policymakers, legal experts, and AI developers should be trained in AI ethics, as well as laws and regulations, to assist in the establishment of a solid regulatory atmosphere.[26]

7. **Encourage Public-Private Relationships:** The government should not be left to control AI. The implementation and creation of the regulations of AI can make a significant contribution through public-private partnerships. The government is advised to work with AI designers, research centres, and civil society groups to establish policies that will lead to the responsible use of AI. Such collaborations will be useful to offset innovation and responsibility and make sure that AI development is in keeping with the interests of the population.
8. **Market Social Recognition and Interaction:** The incorporation of AI systems into society will not be possible without public trust in them. Bangladesh needs to allocate resources in mass education to sensitise the citizenry on the possible risks and rewards of AI. The consultations with the population should also be conducted to provide feedback on the regulation process of AI and make sure that AI policies correspond to the values of the population. Engaging society in the debate concerning AI governance will contribute to the development of trust and the ethical application of AI technologies.
9. **Periodic monitoring and auditing of AI systems:** The National AI Regulatory Authority is required to do frequent audits on AI systems to ascertain that they are not deviating about ethical considerations. This will involve post-deployment monitoring that will determine the results in practice of the AI systems and will address any problems that may arise immediately. Constant observation will allow you to keep track of the fact that AI systems do not harm people or infringe their rights once they are used.

[26] Gunkel DJ, *The Machine Question: Critical Perspectives on AI, Robots, and Ethics* (MIT Press 2017)

VIII. CONCLUSION

What is evident is the need of readily applicable tools that can control the risks of AI technologies as they are implemented by high-impact industries like healthcare, finance and law enforcement. When the harms involve bias, unfair decision-making, and other privacy and privacy-related issues, one can use Algorithmic Impact Assessment (AIA) to detect, document and avoid them prior to deployment and while monitoring an AI system uses it according to the original goals and objectives.

Simultaneously, Bangladesh does not have a blank sheet to begin with. The current governance measures - the National AI Policy 2024, the National Strategy for Artificial Intelligence, the UNESCO AI Readiness Assessment Methodology (RAM) process and its national report, and AI-relevant provisions of the Cyber Security Ordinance 2025 all indicate that there is a growing emphasis on rights-based and accountable AI. The suggestions in this paper should then be interpreted as supplemental to these existing endeavors: they apply to the high impact AI system lifecycle, positioning AIA-style risk assessment, documentation and oversight as prerequisite steps toward standards assurance.

Since Bangladesh is still at a level of its development and has limited resources, it must be implemented step-by-step and in a realistic manner. The first step should be; (i) what is considered as a high-risk AI within the Bangladeshi setting, (ii) a rudimentary, ordinary AIA form and protocol that could be put to use by the agencies and developers without burdensome administrative interference, and (iii) capacity building by way of specially developed training of policymakers, regulators, legal experts and technical units. Early stakeholder involvement - such as civil society, academia, and the private sector - could assist in making sure that the AIA requirements are proportionate and culturally and linguistically responsive (including Bangla data concerns), as well as being consistent with the public expectations.

As far as the schedules are concerned, a gradual method is recommended. During the short-term (about 6-12 months), Bangladesh might implement an ad hoc cross-ministerial steering mechanism or a prominent unit within an existing one, pilot AIAs

in a limited set of high-impact government applications and start baseline transparency (such as public announcements of the use of AI to make consequential decisions and summaries of short AIAs when feasible). The lessons of pilots, in the medium run (say 1-3 years time), can be used to support a standardized national AIA framework, focus more on enforcement routes and the institutional reinforcement required on sustained monitoring (including audit capability and a risk-based organogram of high-impact systems). Bangladesh can also scale AIA requirements in sector, embed them in public procurement and sectoral regulation and turn post-deployment monitoring and public reporting into normal practices in governance in the long run (around 3-5 years).

Throughout the staged implementation of AIA through the lens of enabling governance in Burma within the current policy path that Bangladesh is pursuing, Bangladesh should promote responsible innovation without forfeiting some of the core rights, given the framework of AIA budgeting as an enabling tool. This moderate route can aid in ensuring that the advantages of AI are achieved without enabling some of the avoidable harms to deter trust in the community and disparities in terms of social equality.

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