



AI GOVERNANCE AND DEMOCRATIC ACCOUNTABILITY IN THE ASIA-PACIFIC: A COMPARATIVE STUDY OF PUBLIC SECTOR AI ADOPTION IN PHILIPPINES, SINGAPORE, AND INDIA

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Abstract

A set of principles, standards, and practices, which aid in managing AI usage in organizations, is Artificial Intelligence (AI) governance. Artificial Intelligence Governance (AIG) is an underdeveloped area of research. The AIG is an emerging but significantly underdeveloped area, while there is significant literature emerging on numerous aspects of AI. Also, no study explicitly examined the influence of AI Governance Frameworks (GF) of India, Singapore, along with the Philippines on democratic accountability in the public sector adoption. This study addresses this gap by adopting a mixed-method design and collecting secondary sources of data. The study's findings show that Singapore's AI readiness ratings exceed those of either India or the Philippines. Further, Singapore experiences a high level of AI adoption in its public sector. Moreover, AI adoption improves the public sector Service Delivery (SD) through the increase in the accuracy rate and satisfaction of citizens with the particular service. The challenges related to AI adoption in government systems are algorithmic bias as well as fairness, transparency as well as explainability, data privacy and surveillance, institutional capacity gaps, and regulatory fragmentation.

Keywords

Artificial Intelligence, Democratic Accountability, Governance, Artificial Intelligence Adoption, and Public Sector

1. Introduction

AI, which has already established itself as one of the most significant technologies in society today, is becoming an essential technology for many businesses. Companies implementing AI in their business processes find themselves with new opportunities for value creation; yet, they also need to address the novel challenges, which arise from implementing AI. For example, one among the main challenges faced by companies implementing AI is closing the gap between intention as well as action [1]. For addressing the risks allied with AI, it is essential to not only deal with technical aspects but also to create robust AIG solutions and procedures to properly manage the ethical use of AI technology [2]. A combination of a set of rules, practices, processes, along with technological tools used by organisations to guarantee that their usage of AI technologies aligns with their strategic objectives, legal regulations, and AI principles established by the organisation is AIG [3]. To ensure equitable and fair practice in AI, it is important to create diverse along with representative training data, apply equitable selection of features for AIs, implement rigorous evaluation methods, and build effective governance systems for AIs through policies and guidelines that promote a framework of safe, ethical development based on auditing, the principles of

transparency, and collaboration between stakeholders. The development of AI GFs creates an easy-to-implement and powerful way for individuals to promote democracy via participative and deliberative theory (See Figure 1).

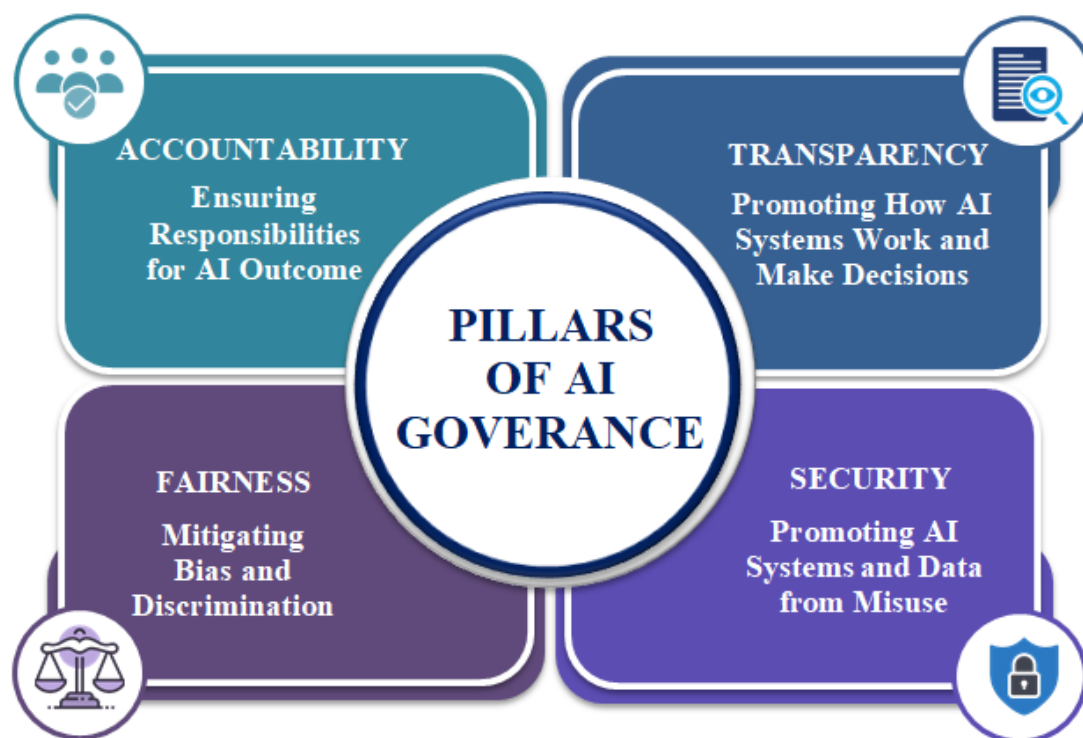


Figure 1: Pillars of AI governance

Currently, AI technologies are facing a rush in diffusion along with adoption by public organizations [6]. It is emerging as the leading as well as innovative factor in the public sector's ongoing governance; also, it absolutely impacts operations, decisions, along with service offering [7]. AI is converting Public Administration (PA) by educating efficiency, transparency, along with facilitating data-driven Decision-Making (DM) [8]. AI's integration into public organizations' operations remnants incomplete despite widespread expectations, which AI can augment public governance [9]. Understanding the welfares of emerging technologies like AI, whilst justifying their accompanying harms, necessitates governance strategies of varied values along with beliefs held by the public [10]. Although there are numerous theoretical papers on AIG, it remains an area with inadequate research. The existing research mainly focused on general AI adoption or large regional guidelines without providing any comparative analysis on how the AI GFs ensure transparency, accountability, along with fairness when employing AI for public services' provision in India, Singapore, as well as the Philippines. Moreover, there is a substantial gap in research concerning how leaders can practically implement AIG mechanisms. Thus, this article researches AI GFs' impact in India, Singapore, as well as the Philippines on democratic accountability in AI adoption, with an emphasis on regulatory framework, leadership capability, along with institutional effectiveness.

Research Objectives

The research objectives provide direction to the study and summarize the research's accomplishments and purpose. In response to the research questions, some of the key objectives for this study are outlined below,

- To compare the evolution and structural features of AI GFs in India, Singapore, as well as the Philippines.
- To evaluate the impact of different regulatory approaches on transparency, accountability, as well as fairness in AI-enabled public services.
- To examine AI technologies' integration in public sector SD across the three countries.
- To appraise the public sector leadership role in implementing and overseeing AIG mechanisms.

- To identify governance gaps and ethical challenges allied with AI adoption in government systems.
- To propose policy recommendations aimed at strengthening democratic accountability in AI-driven PA.

The remaining part is arranged as: summary of the related literature review is given in Section 2; the employed technique is elucidated in Section 3; the outcomes are discussed in section 4; the findings, their limitations, along with the scope of future research are exhibited in Section 5.

2. Related Literature Review

Saudagar Fayaj Munirsab [11] explored AI's role in democratic governance in India. The study collected data from secondary sources. The collected data were appraised qualitatively to interpret the results. The study findings showed that AI improved public SD and strengthened e-governance. Also, the study revealed that threats to privacy along with data protection, algorithmic bias and discrimination, lack of accountability and transparency, digital divide and exclusion, and ethical as well as legal challenges were the challenges of AI in democratic governance. Yet, the study solely relied on data's secondary sources, which might affect the research findings' validity.

A Muh Farid Paradigma [12] investigated the emergence of AI-linked governance practices across legal, policy, along with political domains in Indonesia as well as the Philippines. The study utilized a qualitative comparative study design. The data had been gathered from legal instruments, policy strategies, regulator along with electoral body guidance, and institutional reports from 2020 to 2025. The data had been analyzed using theory-guided qualitative content analysis. The immediate democratic risks arose as of AI-capable infrastructures' institutional embedding that became decision-applicable in practice but not from fully autonomous AI governments. Yet, language as well as documentation asymmetries affected the evidentiary depth of the research.

Syahda Azzahrol and Aminullah [13] scrutinized AI implementation in PA in Indonesia as well as the Philippines. Various sources were used to conduct this research, including Indonesia's presidential regulation No 82 of 2023, the national AI strategy roadmap meant for the Philippines 2.0, and the government AI readiness index for 2025. Each of these data sources provided an analysis of how to implement AI algorithms and what measures were in place to protect privacy and ensure accountability. While Indonesia's implementation of AI was fairly centrally controlled and secured compared to the Philippines, the primary distinction lay in the level of institutionalisation of systems for accountability and transparency of the two countries. Furthermore, all the countries in this study were members of ASEAN.

Charmaine B Distor *et al.* [14] intended to analyze AI's adoption in local governments. It used a mixed-technique approach. The data were obtained from 20 respondents through a self-administered survey in Carmona municipality in Cavite province in the Philippines. The quantitative data were appraised by means of descriptive statistics along with correlation analysis, as well as qualitative data were appraised by employing thematic analysis. The results revealed moderate to higher levels of positive attitude along with behavioural aim toward AI's usage in government operations. However, separate perceptions came as of the key decision-makers who reflected the local government's vision. Moreover, the study findings might not be generalizable to each local government officials.

Haris Alibasic [15] compared the AIG approaches of Singapore and France. The study collected data from Singapore's national AI strategy and model AI GF, France's "AI for Humanity" report, and the AI Verify initiative. The content analysis was employed to analyze the qualitative data. The outcomes revealed distinct yet instructive techniques to AIG in Singapore as well as France. It matches the model AI GF and the national pilot group for digital ethics, respectively. Further, the study found that the AIG approach of Singapore was focused on economic growth along with public service improvement, while France focused on ethical AI development as well as fundamental rights protection. Yet, the study did not examine numerous governance approaches' societal impacts.

Mithila Roy Bardhan [16] explored the adoption of human-centric AI principles like transparency, inclusivity, along with ethical governance in organizations in Asian countries. They used the following sources of information: Indonesia's presidential regulation #82 of 2023, the Philippines' National AI Strategy Roadmap v2.0, along with the Government AI Readiness Index 2025. They analysed the information using content analysis to identify structures of accountability, transparencies of algorithms, and protections of privacy. They found that Indonesia had a centralised and security-focused system with

an emphasis on data sovereignty, with significant reliance on non-binding ethical guidelines for using AI. The Philippines embedded the ethical principles for AI in its operational policies. The main difference between Indonesia and the Philippines was how much the two countries formalised their accountability and transparency systems to ensure that they appropriately used AI. Unfortunately, the study was limited to ASEAN member states.

Angelis O. Arcilla Jr *et al.* [17] compared the AI GFs in numerous international organizations as well as countries. From countries like the United States, the European Union (EU), India, along with the Philippines, the study collected data from AIG policies along with ethical guidelines. The findings revealed that the Philippines' House Bill No. 7913 was a step to AIG. Also, the prevailing guidelines together with legal frameworks on AI ethics placed less emphasis on ethics as well as fairness. Fairness in AI DM, along with transparency, was prioritised to mitigate biases along with promote equal treatment. Even though the study considered data from four countries, it provided the results based on the context of the Philippines only.

Bama Andika Putra [18] inspected the AIG in Southeast Asia as well as regulatory policies to better modulate its use amongst Association of Southeast Asian Nations (ASEAN) states. The study utilized secondary data on ASEAN member states' AIG in the past 5 years, collected as of accessible online documents. The data were analyzed qualitatively. ASEAN can't adopt a decisive strategy in AIG, partly owing to the AI readiness disparity in Southeast Asia. Likewise, Singapore is an ASEAN member state ready to reply to the challenges along with chances posed by AI. Yet, there was a significant difference in available, detailed AI policies among ASEAN member states.

Muh Habibulloh [19] investigated AI and personal data protection's regulatory landscape via a comparative legal analysis betwixt Southeast Asia along with the EU. Data obtained from primary legal materials like the General Data Protection Regulation, the EU AI Act (2021), and important decisions made by the EU's Court of Justice, were used in this study. Qualitative analysis was performed on the data. Data from a range of perspectives highlighted that the EU developed an overarching precautionary policy based on the Charter of Fundamental Rights, which was then implemented through instruments, such as GDPR and AI Act, whereas ASEAN countries adopted a less defined/varied approach and were more focused on economic development. When comparing data for this study on privacy protection in AIG within the EU and five Southeast Asian countries, the authors did not take into account the Philippine perspective.

Bolouboye Micah Eradiri *et al.* [20] explored AI's role in public institutions in improving the level of transparency, responsiveness, along with efficiency in the digital era. This research was qualitative and used data as of policy reports, institutional documents, along with governance performance indicators. AI was found to greatly improve administrative efficiency through automated DM, resources being able to be allocated more optimally, and improving both the speed and accuracy of SD. AI provided an opportunity to make governments more accountable to the public by providing real-time information regarding government activity, providing an opportunity to detect the risks of corruption before they occur, and providing the data needed to support evidence-based policies. Yet, the full implementation of AI was hampered in many developing nations by a lack of digital infrastructure, ethical considerations, data privacy issues, along with a lack of technical capacity.

Patricia Gomes Rego de Almeida and Carlos Denner dos Santos Junior [21] investigated AI implementation by public organizations. By using semi-structured interviews and questionnaires, data for this research were gathered from 28 public organizations from '5' different continents, which had AI systems in place. The data were appraised by employing a mixture of qualitative comparative analysis and content analysis. The results indicated that organisations with trained DM, AI system developers, along with users, achieved a more mature phase of AIG, whereas those that had no such training recorded lower performance levels so far regarding AIG actions. Moreover, government agencies could help to enhance AIG for public organisations by establishing an AI strategy, an AI policy, AI ethical principles, and an AI standards publishing programme. However, it was noted that the sample size did not include a representative proportion of the global AI rankings.

Caroline Atuhaire and Gladys Nelly Kimani [22] scrutinized AI together with machine learning integration in public sector DM. A hybrid method approach was applied in data collection, with qualitative data collected from 127 respondents via structured interviews, which were analysed thematically. Research showed that strong GFs, ethical guidance, and continuous funding infrastructure and human capacity were needed to integrate AI into DM. Five specific opportunities for utilizing AI included predictive analytics in policy development, optimal automated SD, fraud detection along with prevention, efficient resource

allocation, and improved citizen engagement via smart interfaces. No comparative analysis of the potential GFs was performed.

Roland M. Fronda [23] determined the factors affecting AI readiness along with adoption in the Philippines' public sector. The information was gathered through surveys dispersed to 128 public sector employees like government officials, ICT professionals, along with administrators from the province of Bataan. They performed an analysis via descriptive statistics based on the responses received. The correlation analysis was performed to ascertain relationships between AI readiness and AI adoption. Statistically significant relationships were found. The study concluded that organizational readiness and financial/logistics resource constraints were the two primary barriers to AI's successful usage in the public sector, although it noted that sample size might limit the accuracy of results.

Li Xiaoyan and Reynaldo Gacho Segumpan [24] studied the major barriers to AI implementation. The quantitative data were obtained from 200 respondents in China through surveys, and qualitative data were attained using interviews. By employing descriptive statistics along with thematic study, the data were analyzed. AI revolutionized public SD. The various obstacles faced by the public service organizations in implementing AI were financial, ethical, and cultural ones. By considering obstacles to AI adoption, public service organizations could unlock their growth latent along with delivering heightened services to citizens. Yet, the study used a self-report approach to collect the data, which resulted in bias.

Hassan *et al.* [25] inquired about AI's impact in PA on SD. The study utilized a qualitative method, and the data were primarily collected as of secondary sources. The data were analyzed using content analysis. Lagos State was in AI's implementation along with applications. Similarly, the significant roles played by AI are depicted in discharging its duties in numerous MDAs, along with driving public service. No public service could work within AI imperatives devoid of transforming its human resources management along with the workplace idea dynamics. However, the study focused only on Lagos state, which affected the generalizability of the findings across different cultural contexts.

3. Research Methodology

It is a research strategy, which elucidates the principles of epistemology along with ontology into guidelines that signify how research is to be done. It also explains procedures, principles, along with practices, which guide research. The research's main focus is to explore GFs' impact in India, Singapore, along with the Philippines on democratic accountability in public sector AI adoption. The research methods utilized in this study are presented and discussed in this section. It focuses on research design, methods for approaching the data, and the collection of data. The study uses quantitative as well as qualitative techniques to appraise the composed data.

3.1. Research Design

It establishes the route to response the research questions. Thus, it is the key plan for the research like each steps that are accomplished by the researcher. It employs the mixed method design, which is a blend of qualitative along with quantitative approaches to gather as well as analyze data. This investigation primarily examines the influence of AI GFs in India, Singapore, along with the Philippines on democratic accountability regarding public sector AI implementation. In recent years, researchers have commonly employed a mixed methods approach in order to obtain complete and thorough data for answering research questions and achieving research objectives. As such, combining both qualitative and quantitative methodologies is frequently utilized in research questions.

3.2. Data Collection

This research has been completed by a thorough analysis of existing information from previously collected and documented sources (old). Secondary documents published before the writing of the report are utilized to find results and conclusions within this report. The majority of the secondary document sources used in this project are from research publications, published governmental documents, public policy statements, and verifiable web-based sources regarding AIG from India, Singapore, and the Philippines. Some examples of these types of secondary sources include:

- Review articles synthesize findings from primary research, offering critical analyses and identifying trends and patterns in a specific topic of research.

- Research articles offer a detailed report of original research findings, presenting new insights on a specific topic within a field.
- Government publications are a valuable source of secondary data to provide comprehensive insights into a research topic. It includes census data, reports from various government departments, and official statistics.

3.3. Data Analysis

This research employs quantitative as well as qualitative techniques to investigate complex research questions. The secondary data collected relates to AIG in India, Singapore, and the Philippines. Data is obtained through both quantitative and qualitative methods. Existing quantitative and qualitative (or both) methods were used as part of this study by providing additional analyses beyond what was used to develop the original research question. Data is analyzed using two different techniques. Quantitative data are appraised by employing descriptive statistics (frequency and percentage), whereas qualitative data are analyzed by employing qualitative content analysis. In creating a conceptual understanding of how to handle AIG through public sector users in three different geographic regions across the globe, this study offers a broad review of how AIG has impacted the global geographic area by utilizing existing research.

3.4. Advantages of Secondary Research

A primary benefit of secondary data is its ability to save costs. Secondary data allows researchers to access a cost-efficient source of information without having to carry out their own research, making the research process quicker. Secondary research not only offers a more cost-effective way to conduct a study but also allows for comparisons, as in the case of studying different sites or organisations. There are a large number of sources of secondary data (such as previous research) that provide many different types of information to a researcher.

3.5. Ethical Considerations

All research methods utilized in this study comply with relevant regulations and guidelines. As far as utilizing secondary data goes, the researcher adheres to ethical guidelines when acquiring consent and ensuring anonymity for participants. All studies follow ethical principles for maintaining the confidentiality and privacy of participants. No conflict of interest occurs. The results are disclosed to the general public in aggregate form.

4. Results And Discussion

4.1. Evolution and Structural Features of AI Governance Frameworks in India, Singapore, and the Philippines

AI is changing the world at an accelerated rate by disrupting industries, along with changing how people work and live. AI has progressed such that the various government agencies in Asia face the challenge of regulating an emerging, complicated technology within their domestic jurisdictional boundary. The research focuses on analysing AIG in India, Singapore, along with the Philippines, with the point of departure being individual rights as well as liberties' protection. In particular, the Philippines' accountability systems have been enhanced by connecting AI to the Philippines' legal obligations of privacy. The Philippine government policy documents and draft guidelines indicate that any application of AI to the public service is evaluated for its impact on citizens' rights, equitable treatment, and the potential for discriminatory practices. The core principles of AIG in the Philippines are accountability, transparency, fairness, safety, and data privacy [13]. As a result of the Philippine government's efforts toward the advancement of AIG and innovation, the Philippines is likely to continue to strengthen its position with respect to AI, thereby providing improved opportunities for the future. In 2024, the Government AI Readiness Index ranked the Philippines at 56 (188 countries). It garners 58.51 out of 100, which is higher when weighed against the global average (47.59) measured across '3' categories: Government, Technology, along with Data, as well as Infrastructure [26]. India's approach has proceeded by uniting available expertise, building communities of practice, along with working to streamline as well as address sectoral priorities to arrive at a comprehensive GF. Emerging AIG capabilities highpoint the requirement to construct institutional capacity at the centre along with state levels [27].

Presently, India's AIG is directed by standard regulations (like the IT Act 2000, BNS 2023, along with DPDP Act 2023), sectoral guidelines (from regulators like RBI, SEBI, ICMR, etc.), Intellectual

Property Rights laws, together with policy advisory guidelines (e.g., India AIG Guidelines 2025). The key principles of AIG in India include transparency, accountability, safety, reliability as well as robustness, privacy & security, fairness as well as non-discrimination, human-centred values along with “do not harm”, inclusive as well as sustainable innovation, together with digital by design governance [28]. Globally, Singapore has ranked highest regarding “AI preparedness”. The country has accepted numerous strategies like starting national AI strategies. Singapore’s signature to AIG imitates its governance culture broadly. This makes its AIG interesting as of a comparative perspective. A noteworthy background factor to deliberate is that Singapore’s AI journey is registered by a national strategy formulated in 2019 (NAIS 1.0) along with updated in 2023 (NAIS 2.0) [29]. The key principles of AIG in Singapore include accountability, data quality, trusted development as well as deployment, incident reporting, testing as well as assurance, security, content provenance, safety as well as alignment with R&D, along with AI meant for public good [30]. Table 1 depicts the comparison between the AI GFs across diverse countries.

Table 1: Comparison of Artificial Intelligence regulation and governance framework in India, Singapore, and the Philippines [13, 30, and 31]

Indicators	India	Singapore	The Philippines
Key Framework	India AIG Guidelines - Principle-centric AI GF anchored in ‘7’ Sutras	Model AI GF	National AI Strategy Roadmap 2.0 (NAISR)
Legal Status of AI	Hybrid (Advisory + Data Law)	Voluntary (Soft Law)	A strategic framework towards binding regulation
Strategic Focus	NITI Aayog’s National Strategy for AI - AI for All	Establishing Singapore as a trusted global hub for AI	Research innovation through the Centre for AI research
Research Approach	Risk-Based (Proportionality)	Principles-Based	Networked Governance (Government & Private)
Risk Mitigation	Process-Based (Lifecycle)	AI verify	Algorithmic Impact Assessment

4.2. Impact of regulatory frameworks on transparency, accountability, and fairness in AI-enabled public services

Transparency

India AIG Guidelines mandate explainability and disclosure of AI usage to users. The Philippines National AI Strategy Roadmap 2.0 integrates AI into DPI with citizen-centric transparency. The model AI GF emphasizes transparency along with the position of communication regarding AI usage to build trust. By integrating an AI GF, the public sector can augment accountability as well as improve public trust in public services. Even though AI could augment public services’ efficiency, the success rate depends on effective AI GFs, transparency, and the active participation of citizens. AI systems’ development must be interpretable as well as explainable for users to appreciate what they are distributing with [28, 29, and 30].

Accountability

Accountability of AIG in the public sector requires that human authorities are responsible for decisions, ensuring that AI acts as a support tool to maintain legal, ethical, and democratic control. This reinforces democratic control over automated DM. India AIG Guidelines state that developers, along with deployers, are accountable for AI systems’ functioning and outcomes. It promotes AI for all. The implementation of AI in PA in the Philippines faces significant challenges in terms of algorithmic accountability and transparency. The model AI GF sets clear roles as well as accountability in organizations to manage the risks [13, 20, and 30].

Fairness

As government decisions disturb citizen rights, access to services, along with social equity, it is a basis of trustworthy AI in public sector enterprise systems. AI GFs mandate steady bias audits as well as impact charges, chiefly for higher-risk applications [20]. Singapore released a Veritas Toolkit version 2.0 in 2023

with a fairness impost technique to augment fairness in AI adoption [29]. AI systems should not perpetuate biases or else prejudices against or else in favour of individuals, communities, or else groups. Promoting inclusive growth is a vital objective of India's AIG. Therefore, AI systems must be designed along with appraised to ensure fairness as well as to avoid bias or else discrimination, particularly against marginalised communities [30].

4.3. Integration of Artificial Intelligence Technologies in Public Sector Service Delivery across India, Singapore, and the Philippines

The field of PA is experiencing a transformation regarding AI, which provides tools to create operational efficiency, automate some of the routine decisions made by public servants, along with augment service delivery to citizens. Public sector agencies can use an "AI readiness index" as a degree of how ready or well-positioned the agency is to employ AI in public services' delivery. Essentially, AI readiness measures a country's level of readiness to adopt and take advantage of AI technologies at the operational level [28]. The AI readiness index across India, Singapore, and the Philippines is shown in Table 2.

Table 2: AI readiness index [27]

Country	India	Singapore	Philippines
Rank	21	7	49
Policy Capacity	96.00	85.00	84.50
AI Infrastructure	61.17	73.28	48.11
Governance	74.03	78.30	70.84
Public Sector Adoption	79.07	92.50	69.17
Development & Diffusion	53.99	59.85	42.46
Resilience	65.28	77.30	56.62

Across the metrics, it can be noted that Singapore's AI readiness ratings exceed those of either India or the Philippines, pointing out clear gaps in how countries rate as far as their readiness level (compared to others). The reason for this is largely based on the differences between these nations' capacity to embrace technology, including digital literacy, an underdeveloped digital economy (behind in building up their infrastructure), digital infrastructure development, and governance systems. Furthermore, due to Singapore's AI adoption level in its public sector (92.50), there's a larger potential for AI usage by the public sector to augment upon current methods of delivering government services and making them more efficient, accessible, as well as of higher quality. Therefore, when looking at traditional versus AI-enhanced methods for delivering public service, it is seen that Singapore's method for AI-enhanced public SD is more effective compared to India and the Philippines. In fact, with advancements in AI technology changing how governments provide public services, one can clearly see through data usage that implementing AI in government services' delivery creates significant improvements for citizens' experiences while also increasing the efficiency and quality of the services provided. The data within Table 3 outlines a comparative analysis between traditional and AI-enhanced methods of delivering significant public services, such as submitting a permit application, enrolling in a benefits program, renewing licenses, requesting information, and resolving complaints.

Table 3: Comparison of traditional and AI-enhanced service delivery [22]

Service Category	Traditional Processing Time (days)	AI-Enhanced Processing Time (days)	Accuracy Rate Improvement (%)	Citizen Satisfaction Increase (%)
Permit Applications	15 to 30	1 to 3	23	34
Benefit Enrolment	45 to 60	5 to 10	31	42
License Renewals	7 to 14	Instant to 1 day	18	28
Information Requests	2 to 5	Instant	45	56
Complaint Resolution	30 to 45	10 to 15	27	38

From Table 2, it has been concluded that AI technologies show more seamless and efficient SD processes that reduce duplication of effort and minimize citizen burden in providing information. Hence, the accuracy rate and satisfaction of citizens are improved. The efficiency gain of AI in public services is tabulated in Table 4.

Table 4: Efficiency gain in AI adoption in Public Services [32]

Tasks	Percentage Improvement (%)
Time saved on administrative tasks	30
Cost reduction	22
Increased accuracy in DM	25
Improved response time to citizen queries	35
Enhanced resource allocation	20

From Table 4, it is shown that the maximum percentage gain is attained for better response time to citizen queries (35%), followed by time saved on administrative tasks (30%), increased accuracy in DM (25%), cost reduction (22%), and enhanced resource allocation (20%). In Figure 2, a graphical representation of the efficiency gains as of AI implementation in public services is given.

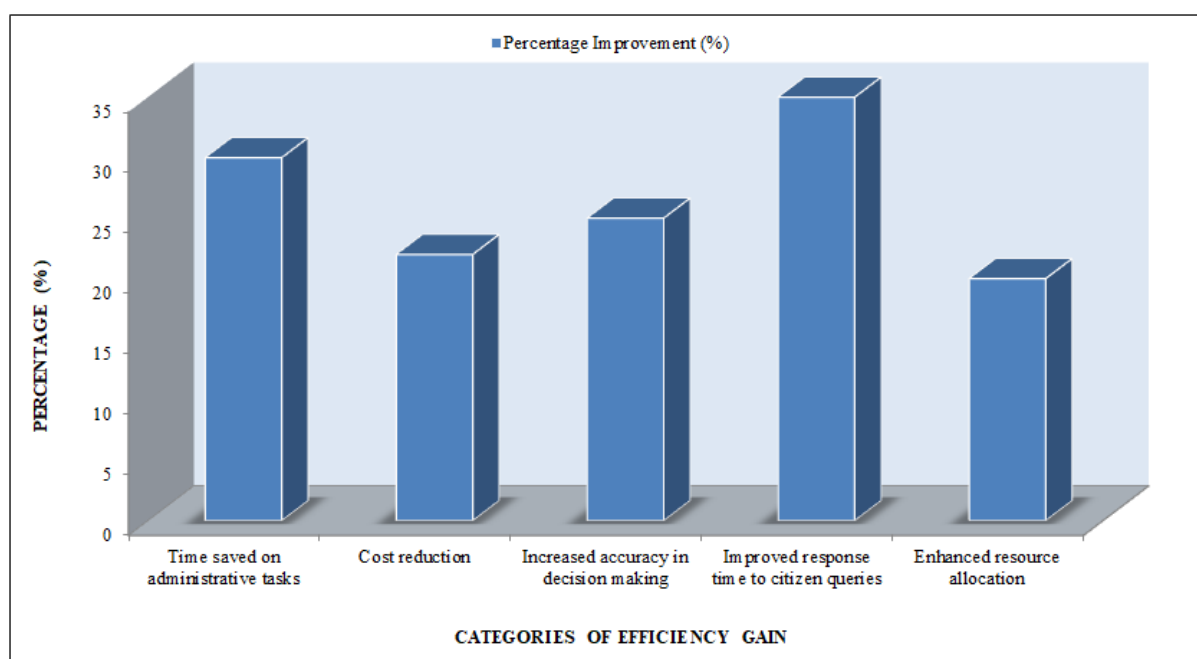


Figure 2: Reported Efficiency Gains from AI Implementation in Public Services [32]

4.4. Role of the public sector in implementing and overseeing AI governance mechanisms

A government have to make an AI policy along with GFs to aid guide AI's ethical usage as well as to offer clarity regarding AI principles, as well as priorities for managing the risks and exploiting adopting AI opportunities. Handling AI adoption is complex due to the inherent tension betwixt public organizations' individuality, considered by formal as well as rigid structures, along with AI innovation demands, which necessitate experimentation as well as flexibility. Leadership support is one among the key factors for AI's successive implementation. Implementing AI is accountable for emerging risk mitigation frameworks. Various governments are developed AI risk mitigation techniques, which deliver numerous international samples that could be personalised to the local context. Public sector leaders could harness AI's potential whilst preserving accountability as well as serving the public interest through the adoption of AIG mechanisms [9, 20, and 34].

4.5. Governance gaps and ethical challenges associated with AI adoption in government systems

Gaps in AI governance implementation in India

Even though the EU set strict regulations for high-risk AI, India still depends on outdated laws designed for privacy and cybercrime. Regulations are inadequate to address issues like as biased algorithms along with the question of who is accountable if AI goes wrong. NITI Aayog industrialized the National Strategy on AI, taking an “AI for All” in 2018. The digital divide widens the governance gap. Most Indians still lack access to online services. In 2023, the Ministry of Electronics as well as Information Technology utilized the Digital India Act to substitute the IT Act. This new law is expected to cover numerous risks allied with AI [35].

Gaps in AI governance implementation in Singapore and the Philippines

Despite growing attention to AIG, potential gaps may continue to hinder the ability of Singapore and the Philippines to effectively regulate the technology across the region. First is the lack of binding enforcement. Singapore is 2nd for Government AI Readiness [36]. In 2022, a Minimum Viable Product (MVP) termed “AI Verify” was propelled by Infocomm Media Development Authority of Singapore along with the Personal Data Protection Commission to fill the perceived gap in AIG testing as well as evaluation [29]. A significant gap is present in the Philippines as the government agencies lack the funding, skilled personnel, and clear policy frameworks necessary for effective AI integration. NAISR 2.0 reflects the recent advancements in AI systems. However, on governance, the Philippines has still not enacted legally binding rules and frameworks to regulate AI. Several discussions with public and private sector experts and representatives reveal that a “light touch” approach presents the most feasible pathway for the country in managing the balance of innovation and regulation to AI [37]. Government systems face lots of ethical challenges in adopting AI, which are identified and given in Table 5.

Table 5: Challenges associated with AI adoption in government systems [38]

Challenge	Description	Governance Implications
Algorithmic Bias and Fairness	Replication of social inequalities in datasets.	Discriminatory outcomes undermine neutrality and weaken citizen trust.
Transparency and Explainability	Black-box AI systems block DM.	Weakening of accountability, due process, and the ability of citizens to contest decisions.
Data Privacy and Surveillance	AI relies on biometric and surveillance data.	Expansion of state surveillance threatens civil liberties and the erosion of privacy rights.
Institutional Capacity Gaps	The people working in the public sector lack technology knowledge.	Poor monitoring and oversight, as well as dependence on private vendors.
Regulatory Fragmentation	Absence of a clear and consistent AI regulatory framework.	Inconsistent standards, poor international cooperation, and policy uncertainty.

4.6. Recommendations to Strengthen the Democratic Accountability in AI-Driven Public Administration

To improve AI adoption advantages in PA and ensure transparency and accountability, it is essential to found comprehensive regulatory as well as ethical frameworks. Here, to improve the democratic accountability, several policy recommendations are provided AI adoption [8, 20].

- Governments should implement strong legal techniques for AI use in PA, focusing on specific transparency as well as accountability requirements for AI adoption in the public sector.
- The governments should implement AI explainability standards that require AI systems to offer clear and interpretable justifications for their outputs to ensure accountability.
- Public awareness and understanding of AI are important for developing trust and encouraging civic engagement in AIG. Thus, it is recommended to invest in AI literacy programs that help citizens to understand how AI systems work, their potential benefits, and the risks involved.
- Governments, private technological firms, along with advanced institutions must be invigorated to cooperate to embolden innovation along with knowledge input in AIG applications.
- Regulations surrounding data localization, cross-border transfers, and AI chip usage should be integrated into the AI GF.

5. Conclusion

Here, the study examined the evolution and structural features of AI GFs in India, Singapore, along with the Philippines. Also, AI technologies' integration into public services' delivery within each country was also examined. The study determined that each country had established its AI GFs as follows: India established AIG Guidelines, Singapore established a Model AI GF, and the Philippines established a National AI Strategy Roadmap 2.0. Comparing the traditional along with AI-enhanced SD showed that AI adoption in public sectors improved the accuracy rate and citizens' satisfaction. Several obstacles inhibited AI implementation in government; some of these were biased algorithms and equality, the lack of transparency and explainability, issues with data security and surveillance, as well as issues with institutional capacity gaps and regulatory fragmentation. The findings of this research were limited to the data as this research was based on the literature and publicly available documents. This meant that unpublished experiences or other detailed developments taking place in India, Singapore, and the Philippines were not considered. Future research will combine primary and secondary data to better examine the influence of AI GFs on democratic accountability.

References

1. Emmanouil Papagiannidis, Ida Merete Enholm, Chirstian Dremel, Patrick Mikalef and John Krogstie, "Toward AI Governance: Identifying Best Practices and Potential Barriers and Outcomes", *Information Systems Frontiers*, vol. 25, pp. 123–141, 2023.
2. Amna Batool, Didar Zowghi and Muneera Bano, "AI governance: a systematic literature review", *AI and Ethics*, vol. 5, pp. 3265–3279, 2025.
3. Teemu Birkstedt, Matti Minkkinen, Anushree Tandon and Matti Mantymaki, "AI governance: themes, knowledge gaps and future agendas", *Internet Research*, vol. 33, no. 7, pp. 133-167, 2023.
4. Ibrahim Atoum, "Revolutionizing AI Governance: Addressing Bias and Ensuring Accountability Through the Holistic AI Governance Framework", *International Journal of Advanced Computer Science and Applications*, vol. 16, no. 2, 2025.
5. Mehmet B Unver, "AI governance: Compromising democracy or democratising AI?", In *Proceedings of the TPRC2024 The Research Conference on Communications, Information and Internet Policy*, pp. 1-50, 2024. <https://ssrn.com/abstract=4913658>
6. Averill Campion, Mila Gasco-Hernandez, Slava Jankin Mikhaylov and Marc Esteve, "Overcoming the Challenges of Collaboratively Adopting Artificial Intelligence in the Public Sector", *Social Science Computer Review*, vol. 40, pp. 1-33, 2022.
7. Bhanuprakash Madupati, "The Role of AI in the Public Sector: A Technical Perspective", *Journal of Artificial Intelligence & Cloud Computing*, vol. 3, no. 4, pp. 1-6, 2024.
8. Changkui LI, "AI-Driven Governance: Enhancing Transparency and Accountability in Public Administration", *Digital Society & Virtual Governance*, vol. 1, no. 1, pp. 1-16, 2025.
9. Friso Selten and Bram Klievink, "Organizing public sector AI adoption: Navigating between separation and integration", *Government Information Quarterly*, vol. 41, pp. 1-14, 2024.
10. Matthew R O'Shaughnessy, Daniel S Schiff, Lav R Varshney, Christopher J Rozell and Mark A Davenport, "What governs attitudes toward artificial intelligence adoption and governance?", *Science and Public Policy*, vol. 50, pp. 161–176, 2023.
11. Saudagar Fayaj Munirsab, "Artificial Intelligence and Democratic Governance in India: Opportunities and Challenges", *Knowledgeable Research*, vol. 05, pp. 134-136, 2026.
12. Muh Farid Paradigma A, "From Courts to Campaigns: AI, Accountability, and Digital Sovereignty in Indonesia and the Philippines", *AI, Law, Politics: An Interdisciplinary Journal on Human – AI Interaction in Legal and Political Systems*, vol. 1, no. 2, pp. 111-129, 2025.
13. Syahda Azzahro and Aminullah, "Comparison of Indonesian and Philippine Public Administration Regulations in Dealing With AI Disruption in Asean", *International Journal of Multidisciplinary Reseach*, vol. 2, no. 1, pp. 168-177, 2026.
14. Charmaine B Distor, Odkhuu Khaltar and Jae Moon M, "Adoption of Artificial Intelligence (AI) in Local Governments: An Exploratory Study on the Attitudes and Perceptions of Officials in a Municipal Government in the Philippines", *Journal of Public Affairs and Development*, vol. 8, pp. 33-65, 2021.

15. Haris Alibasic, “Harmonizing artificial intelligence (AI) governance: A comparative analysis of Singapore and France’s AI policies and the influence of international organizations”, *Global Public Policy and Governance*, vol. 5, pp. 1-21, 2025.
16. Mithila Roy Bardhan, “Placing Humans at the Core: AI-Driven Productivity Improvements in Asian Organisations”, *International Journal of Leadership and Management*, vol. 2, no. 2, pp. 1-12, 2026.
17. Angelis O Arcilla Jr, Adrian Kim V Espallardo, Clio Andrei J Gomez, et.al., “Ethics in AI Governance: Comparative Analysis, Implication, and Policy Recommendations for the Philippines”, 27th International Computer Science and Engineering Conference (ICSEC), 14-15 September, Samui Island, Thailand, pp. 319-326, 2023.
<https://doi.org/10.1109/ICSEC59635.2023.10329756>
18. Bama Andika Putra, “Governing AI in Southeast Asia: ASEAN’s way forward”, *Frontiers in Artificial Intelligence*, vol. 7, pp. 1-6, 2024.
19. Muh Habibulloh, “Digital Governance And The Right To Privacy: A Comparative Analysis Of AI Regulation In Southeast Asia And The European Union”, *Journal of Law, Policy and Global Development*, vol. 1, no. 1, pp. 1-17, 2025.
20. Bolouboye Micah Eradiri, Okocha Chinedu, Ojo Oluwaseye Emmanuel, Emmanuel Acheampong, Omokukpo Moses Etana and Udoh Patience Oiwo, “Artificial Intelligence, Political Accountability, and Administrative Efficiency: Pathways to Good Governance in the Digital Era”, *World Journal of Advanced Research and Reviews*, vol. 28, no. 02, pp. 111–122, 2025.
21. Patricia Gomes Rego de Almeida and Carlos Denner dos Santos Junior, “Artificial intelligence governance: Understanding how public organizations implement it”, *Government Information Quarterly*, vol. 42, pp. 1-18, 2025.
22. Caroline Atuhaire and Gladys Nelly Kimani, “AI and Governance: Opportunities and Risks of Machine Learning in Public Sector Decision-Making”, *Engineering and Technology Journal*, vol. 10, no. 10, pp. 7390-7410, 2025.
23. Roland M Fronda, “Determinants of Artificial Intelligence (AI) Readiness and Adoption in Public Sector Governance”, *International Journal of Research and Innovation in Social Science*, vol. X, no. I, pp. 3274- 3290, 2026.
24. Li Xiaoyan and Reynaldo Gacho Segumpan, “Navigating AI Adoption Challenges in China’s Public Sector: Implications for Efficiency and Performance”, *International Journal of Academic Research in Business and Social Sciences*, vol. 15, no. 3, pp. 1367- 1381, 2025.
25. Hassan, Korede Ibrahim, Fatile, Jacob Olufemi Fatile and Oladimeji Ashade, “Assessment of Artificial Intelligence in Public Administration: Implications for Service Delivery in Lagos State Public Service”, *BVIMSR’s Journal of Management Research*, vol. 15, no. 2, pp. 120-138, 2023.
26. “PHILIPPINES Artificial Intelligence Readiness Assessment Report”, The United Nations Educational, Scientific and Cultural Organization, pp. 1-64, 2025.
<https://unesdoc.unesco.org/ark:/48223/pf0000393860>
27. Oxford Insights, “Government AI Readiness Index 2025”, Oxford Insights, pp. 1-70, 2025.
<https://oxfordinsights.com/ai-readiness/government-ai-readiness-index-2025>
28. Jian Xu, Terence Lee and Gerard Goggin, “AI governance in Asia: policies, praxis and approaches”, *Communication Research and Practice*, vol. 10, no. 3, pp. 1-14, 2024.
29. Jason Grant Allen Jane Loo and Jose Luna, “Governing intelligence: Singapore erving intelligence: Singapore’s evolving AI go olving AI governance ernance framework”, *Cambridge Forum on AI: Law and Governance*, vol. 1, pp. 1-30, 2025.
30. Vikash Gautam and Anugya Singh, “Quantifying And Responding To The Economic Impact Of Ai In India, Singapore, And Indonesia”, *Asia Group Advisors*, pp. 1-63, 2025.
https://aiknowledgeconsortium.com/wp-content/uploads/2026/02/Digital_Quantifying-and-Responding-to-the-Economic-Impact-of-AI-in-India-Singapore-and-Indonesia_compressed-1-2.pdf
31. “Global AI Governance Frameworks A Comparative Study”, Ministry of Communication and information technology, pp. 1-29, 2026.
<https://ai.gov.sg/SynchedFiles/en/Resources/Global%20AI%20Governance%20Frameworks%20A%20Comparative%20Study.pdf>

32. SantoshKumar Pulijala, “Artificial Intelligence in Governance: Opportunities, Challenges, and Ethical Implications for Public Administration”, *International Journal for Multidisciplinary Research*, vol. 6, no. 6, pp. 1-10, 2024.
33. Jayant Bhat, Dilliraja Sundar and Yashovardhan Jayaram, “AI Governance in Public Sector Enterprise Systems: Ensuring Trust, Compliance, and Ethics”, *International Journal of Emerging Trends in Computer Science and Information Technolog*, vol. 5, no. 1, pp. 128-13, 2024.
34. “Artificial Intelligence in the Public Sector”, World Bank Group, pp. 1-13, 2026.
<https://documents1.worldbank.org/curated/en/746721616045333426/pdf/Artificial-Intelligence-in-the-Public-Sector-Summary-Note.pdf>
35. Nayan Awasthi and Aman Pandey, “India’s AI Governance Gap: Risks, Remedies and the Road Ahead”, Bharti Institute of Public Policy, 2025.
<https://blogs.isb.edu/bhartiinstitute/2025/09/22/indias-ai-governance-gap-risks-remedies-and-the-road-ahead>
36. Hpone Thit Htoo, “Beyond the Matrix: AI Governance Gaps in Southeast Asia”, Center for Strategic & International Studies, 2025. <https://www.csis.org/blogs/new-perspectives-asia/beyond-matrix-ai-governance-gaps-southeast-asia>
37. Jose Miguelito Enriquez, "Philippine AI Governance: Time to Shift Gears", Fulcrum Analysis of Southeast Asia, 2025. <https://fulcrum.sg/philippine-ai-governance-time-to-shift-gears/>
38. Renu Bala, “Artificial Intelligence and the Future of Public Administration: Navigating Ethics, Efficiency, and Democratic Accountability in Algorithmic Governance”, *International Journal of Multidisciplinary Research*, vol. 3, no. 8, pp. 1-12, 2025