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# МЕЖДУНАРОДНЫЙ ОПЫТ ГОСУДАРСТВЕННОГО УПРАВЛЕНИЯ

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# Administrative sovereignty in the age of algorithmic governance: challenges and prospects for policy autonomy of the BRICS states

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**Abstract.** Governments worldwide are increasingly turning to artificial intelligence (AI) and algorithmic systems to improve service delivery, manage resources, and respond to citizens' needs. These tools promise efficiency, precision, and cost savings, making them highly attractive for policymakers. However, for particularly emerging digital powers like India and Russia — the rapid spread of algorithmic governance raises a critical dilemma: can these countries harness innovation without eroding their own administrative and policy autonomy? This study explores algorithmic governance as the integration of AI into decision-making in public administration. While such systems have the potential to modernize governance, they also pose risks to administrative sovereignty, especially when states depend heavily on foreign technologies. In developing contexts, structural weaknesses such as fragile institutions, limited domestic innovation, and reliance on global technology firms intensify this vulnerability. Drawing on theories of technological determinism, bureaucratic autonomy, and digital colonialism, the study examines India and Russia as case studies. The findings reveal opportunities for efficiency and transparency but also highlight risks of exclusion, bias, and dependency. The study argues that the tension between modernization and autonomy demands a framework for algorithmic sovereignty, which emphasizes ethical AI use, domestic technological development, and institutional safeguards to ensure that technology serves governance rather than governs it.

**Keywords:** AI-driven governance, institutional independence, national digital autonomy, policy self-determination, developing world, technological dependency, bureaucratic autonomy, algorithmic impact on decision-making

**Contribution.** All the authors participated in the development of the concept of this review, data collection, processing and analysis, drafted the manuscript, and formulated the conclusions.

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# Административный суверенитет в эпоху алгоритмического управления: вызовы и перспективы политической автономии в странах БРИКС

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**Аннотация.** Государства по всему миру активно внедряют системы искусственного интеллекта (ИИ) и алгоритмические решения для повышения эффективности предоставления государственных услуг, управления ресурсами и реагирования на потребности граждан. Эти технологии обещают эффективность, точность и сокращение издержек, что делает их особенно привлекательными для политиков. Однако для таких новых цифровых держав, как Индия и Россия — стремительное распространение алгоритмического управления порождает ключевую дилемму: способны ли они использовать инновации, не подрывая собственный административный и политический суверенитет? Рассмотрено алгоритмическое управление как интеграция ИИ в процессы принятия решений в сфере государственного администрирования. Обладая потенциалом модернизации управления, подобные системы одновременно создают риски для административного суверенитета, особенно в условиях высокой зависимости государств от зарубежных технологий. В контексте национального развития такие структурные слабости, как хрупкость институтов, ограниченные возможности внутреннего инновационного развития и зависимость от глобальных технологических корпораций усиливают уязвимость. Опираясь на теоретические подходы технологического детерминизма, бюрократической автономии и цифрового колониализма, авторы проанализировали Индию и Россию. Полученные результаты демонстрируют возможности для повышения эффективности и прозрачности, но также риски исключения, предвзятости и зависимости. Сделан вывод о том, что противоречия между модернизацией и автономией требуют формирования концепции алгоритмического суверенитета, основанной на этическом использовании ИИ, развитии национальных технологий и институциональных гарантиях, обеспечивающих служение технологий интересам управления, а не их подмену.

**Ключевые слова:** цифровое регулирование, технологическая независимость, суверенитет данных, развивающиеся страны, влияние ИИ на управленческие решения

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## Introduction

Artificial intelligence (AI) is reshaping the functioning of governments. From detecting fraud and predicting crime hotspots to managing welfare distribution, algorithms are increasingly embedded in public administration. While digital technologies bring speed and efficiency, they also create governance concerns, especially in countries dependent on foreign-made systems [1].

For the BRICS states, where infrastructure, regulatory frameworks, and technical expertise remain uneven, the adoption of algorithmic tools often depends on global technology corporations or foreign governments. These systems may not be aligned with local needs or values and can weaken the ability of national administrations to adapt policies. The key question emerges: ***Does technological adoption risk compromising administrative sovereignty in exchange for modernization?***

**The aim of the study** is to determine the correlation between digital modernization and the political sovereignty of Russia and India.

India and Russia provide instructive comparisons. India emphasizes citizen participation and inclusion, whereas Russia pursues centralized control. Despite their differences, both countries face the challenge of leveraging AI to enhance governance while protecting institutional autonomy and democratic accountability.

## Theoretical Framework

Several theoretical lenses inform this analysis:

1. **Bureaucratic Autonomy**: rooted in Weber's theory of rule-based governance, bureaucratic autonomy stresses insulation from external pressures. In the age of AI, autonomy is increasingly tied to a state's capacity to design, regulate, and monitor algorithms [2].

2. **Technological Determinism**: this perspective argues that technological advances often drive societal change. By adopting ready-made algorithms, governments may unconsciously accept external biases embedded in their design, thereby shaping policy outcomes [3].

3. **Digital Colonialism**: this concept refers to the dominance of developing nations by technologically powerful actors. Wholesale import of AI tools can result in local administrations losing decision-making independence [4].

4. **Algorithmic Sovereignty**: a proposed response, where states assert control over algorithmic systems by building domestic capacity, establishing regulatory oversight, and ensuring AI is aligned with public values [5].

## Methodology

This study employs **Qualitative Comparative Analysis (QCA)** to investigate India and Russia's approaches to AI in governance. These countries were selected because:

- Both have national AI strategies and significant public-sector investments in digital programs.
- They represent contrasting governance styles — India's decentralized democratic model and Russia's centralized, security-driven approach.

**Sources of data include:**

- Government reports and policy documents[1].
- Publications from international think tanks and policy research institutes [4; 7].
- Peer-reviewed academic literature and expert commentaries [2; 3; 5; 6].

## Case Studies

### A. India

India integrates AI into its **Digital India** mission, which seeks to use technology to empower citizens and improve public service delivery.

- **Aadhaar**: launched in 2009, this biometric ID covers over one billion individuals and has reduced fraud in welfare delivery. However, critics raise concerns about privacy, consent, and the exclusion of citizens who fail biometric authentication[2] [6].
- **Predictive Policing in Uttar Pradesh**: algorithms are used to forecast crime-prone areas. Yet, evidence suggests such tools replicate societal biases, disproportionately affecting marginalized groups[3] [1].
- **PMGDISHA**: a digital literacy program targeting rural India, where AI is applied to personalize learning and assess outcomes[4].

[1] Press Information Bureau, Government of India. Official press releases. New Delhi: Press Information Bureau. URL: https://pib.gov.in (accessed: 17.05.2025); Digital India Mission. India AI: National AI Portal of India. New Delhi: Government of India. URL: https://indiaai.gov.in (accessed: 25.05.2025); President of the Russian Federation. Decree No. 490 on the development of artificial intelligence in the Russian Federation. 10 October 2019. URL: http://publication.pravo.gov.ru/Document/ View/0001201910100003 (accessed: 17.05.2025).

[2] Press Information Bureau, Government of India. Official press releases. New Delhi: Press Information Bureau. URL: https://pib.gov.in (accessed: 17.05.2025).

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[4] Digital India Mission. India AI: National AI Portal of India. New Delhi: Government of India. URL: https://indiaai.gov.in (accessed: 25.05.2025).

• **My Gov**: A citizen engagement platform that incorporates AI for real-time sentiment analysis, enabling participatory governance at scale[5].

• **B. Russia**

• Russia treats AI as both a developmental priority and a matter of national security.

• **Moscow Smart City Project**: Characterized by mass surveillance, facial recognition, and traffic monitoring, the initiative boosts urban management but raises questions about privacy and civil liberties [4; 6].

• **Federal Tax Service**: AI-driven fraud detection has improved compliance but lacks transparency, leaving taxpayers uncertain about how decisions are reached [4].

• **Digital Economy Programme**: The national AI roadmap targets global leadership by 2030, with emphasis on Russian innovation and open-source tools. The National AI Strategy, approved by Presidential Decree No. 490 (2019), formalizes this goal.

## Results

Findings reveal several common governance challenges:

• **Foreign Dependence**: India in particular relies heavily on imported technologies, raising issues of contextual appropriateness and data sovereignty [1, 3, 4].

• **Opacity of Algorithms**: Lack of explainability creates gaps in accountability and public trust [2; 7].

• **Bias in AI Systems**: Datasets reflecting historical inequalities risk reinforcing discrimination in policy implementation [1; 3].

• **Accountability Gaps**: Ambiguity persists over responsibility when algorithms influence or determine outcomes [5; 6].

• **Privacy Concerns**: Extensive data collection without robust legal protections creates risks of misuse and surveillance [4].

• **Regulatory Lag**: Both states struggle to adapt legal frameworks to the pace of technological change, particularly regarding ethics and citizen redress [2; 5].

## Discussion

AI adoption presents a complex paradox for governance: while it significantly improves efficiency, speed, and administrative responsiveness, it simultaneously creates risks of weakening accountability structures. In India, participatory initiatives such as **My Gov** are intended to broaden inclusion and encourage citizen feedback. However, the reliance on foreign-developed systems often generates a gap between the country's policy goals and the technological models being deployed [1]. For example, credit-assessment algorithms designed for global markets may

[5] Digital India Mission. India AI: National AI Portal of India. New Delhi: Government of India. URL: https://indiaai.gov.in (accessed: 25.05.2025).

overlook local socio-economic factors, leading to the unintended exclusion of rural or marginalized groups who might otherwise qualify for state benefits.

In contrast, Russia prioritizes domestic technological development as a means of minimizing foreign dependence. While this approach strengthens control over critical infrastructure, it introduces a different set of challenges. Heavy reliance on surveillance-driven projects and opaque algorithmic decision-making erodes public confidence in institutions and limits civic participation.

Both experiences demonstrate how algorithmic governance risks shifting authority from democratic deliberation to **technocratic rule**, where data models outweigh human judgment. Such a transition produces not only technical fragility but also a **democratic deficit**, as citizens lose both visibility into and influence over how decisions are made [7].

## Recommendations

To safeguard **algorithmic sovereignty**, the following measures are essential:

1. **Strengthen Domestic AI Ecosystems**: Expand research, invest in universities, and encourage local startups; promote open-source solutions [5].
2. **Inclusive Design Processes**: Involve administrators, technologists, civil society, and citizens in shaping AI systems [7].
3. **Legal and Ethical Frameworks**: Introduce legislation mandating transparency, explainability, and fairness in all public-sector AI [2].
4. **Capacity Building**: Train bureaucrats to understand and question AI decisions; establish AI ethics units within government [5].
5. **Citizen Awareness**: Expand digital literacy so citizens know their rights in interactions with automated systems[6].
6. **Regional Cooperation**: Build Global South alliances to create standards and avoid dependence on unregulated external technologies [1].

## Conclusion

AI today functions not merely as a technological instrument but as a political and administrative force that reshapes how decisions are taken, whose voices are prioritized, and what values are embedded in governance systems. For the BRICS states, this transformation is particularly significant, as they must simultaneously pursue modernization and preserve their autonomy. The paradox is clear: AI promises efficiency, precision, and innovation, yet it can also erode transparency, accountability, and sovereignty when adopted without adequate safeguards.

The comparative experiences of India and Russia illustrate this tension. India has attempted to harness AI for inclusion and citizen participation, yet its dependence on foreign-designed technologies has sometimes resulted in outcomes

[6] Digital India Mission. India AI: National AI Portal of India. New Delhi: Government of India. URL: https://indiaai.gov.in (accessed: 25.05.2025).

misaligned with local contexts. Russia, by contrast, seeks to strengthen domestic innovation and strategic control but often does so through opaque, surveillance-heavy approaches that limit citizen agency. Both trajectories underscore the risks of overreliance — whether on external providers or on centralized state apparatuses.

Going forward, the path toward **algorithmic sovereignty** must involve a deliberate balance between technological adoption and democratic oversight. This requires transparent institutions, accountable regulatory frameworks, citizen engagement, and regional collaboration. Only by embedding ethical and human-centered principles into AI governance can developing nations modernize without sacrificing their policy independence and administrative sovereignty.

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