


Chapter 2

Algorithmic Sovereignty and Democratic Legitimacy: A Cross–Jurisdictional Analysis of AI Governance Frameworks in the Post–GDPR Era

Soumi Ghosh

 <https://orcid.org/0000-0003-2764-5944>

Maharaja Agrasen Institute of Technology, India

Ritik Raj

Maharaja Agrasen Institute of Technology, India

ABSTRACT

The spread of AI is also the essential issue of algorithmic sovereignty and democratic validity on the automated decision-making process. This paper presents a mixed-methods comparative research on governance systems of AI in the EU, US, UK, Canada, South Korea, Taiwan and Japan. Carried out based on a multi-dimensional measurement of the institutional capacity and legal frameworks, accountability systems, and implementation performance, we discover three models of governance, comprehensive regulatory (EU-led), fragmented sectoral and adaptive hybrid approaches. Results point out such regulatory imbalances that serious gaps exist in terms of citizen impact assessment, enforcement measurement, and transnational coordination. The proposed four-pillar framework is focused on democratic legitimacy, institutional capacity, adaptive regulation, and international coordination,

DOI: 10.4018/979-8-3373-9918-8.ch002

Copyright © 2026, IGI Global Scientific Publishing. Copying or distributing in print or electronic forms without written permission of IGI Global Scientific Publishing is prohibited. Use of this chapter to train generative artificial intelligence (AI) technologies is expressly prohibited. The publisher reserves all rights to license its use for generative AI training and machine learning model development.

and the suggestions are offered on the preparation of which it is possible to implement a new level of algorithmic rule without undermining the fundamentals of democracy in phases.

1. INTRODUCTION

The change has been fundamental as the current state of affairs of democratic governance has witnessed the advent of the artificial intelligence which has changed the mode of access to livelihoods in terms of the jobs, healthcare, education, and democratic procedures by the side of the billions of citizens all over the world through the mediation of the AI systems (Zuboff, 2019; Helbing et al., 2019). Based on the latest data, the scale of this change has now never been so significant: the global AI market has already reached a value of more than 387 billion dollars in 2023, with experts estimating it to more than triple to 1.8 trillion dollars by 2030, and an impressive 3.7 billion citizens worldwide now engage with AI-powered technologies every day via social media, search engines, and online government services (McKinsey & Company, 2024; Statista, 2024).

The resulting proliferation of technology has brought about what scholars have called the algorithmic sovereignty crisis, which stands out as a contradiction of the key tenets of democracy, namely transparency in governance, accountability in the hands of the government, and citizen action (Bucher, 2018; Yeung, 2017). Adoption of the General Data Protection Regulation (GDPR) by the European Union, which came into effect in 2018, was a turning point in the history of digital government, as this legislation introduced novel principles regarding the rights of individuals and the responsibility of businesses (Bradford, 2020; Nemitz, 2018). Nonetheless, the post-GDPR events have demonstrated the severe deficiency of current regulatory frameworks of AI governance, namely the ways they fail to address, on a democratic level, citizen engagement and governance.

The Problem: Fragmented Democratic Control in the AI Era

Current data demonstrates the severity of democratic governance gaps in AI regulation. A 2023 survey by the MIT Technology Review found that 68% of EU respondents express low confidence that AI systems are governed in ways that protect democratic rights (MIT Technology Review, 2023). In the United States, regulatory fragmentation has led to over 35 unresolved cross-border AI enforcement disputes with the EU in 2022 alone, threatening citizen rights and undermining democratic oversight (Federal Trade Commission, 2023; European Data Protection Board, 2023). Meanwhile, emerging democracies face the dual challenge of developing

56 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/algorithmic-sovereignty-and-democratic-legitimacy/402885

Related Content

Machine Learning Approaches to Predict Crop Yield Using Integrated Satellite and Climate Data

Kavita Jhahhariaand Pratistha Mathur (2022). *International Journal of Ambient Computing and Intelligence* (pp. 1-17).

www.irma-international.org/article/machine-learning-approaches-to-predict-crop-yield-using-integrated-satellite-and-climate-data/300799

An Enterprise Ontology Based Conceptual Modeling Grammar for Representing Value Chain and Supply Chain Scripts

Wim Laurierand Geert Poels (2014). *International Journal of Conceptual Structures and Smart Applications* (pp. 18-35).

www.irma-international.org/article/an-enterprise-ontology-based-conceptual-modeling-grammar-for-representing-value-chain-and-supply-chain-scripts/120232

Digital Divide in Latin American Higher Education: Challenges and Obstacles in the Face of Artificial Intelligence

Yolanda Álvarez-Sánchezand Diana Carol Castro-Mazanett (2026). *AI for Organizational Excellence and Inclusive Growth* (pp. 293-316).

www.irma-international.org/chapter/digital-divide-in-latin-american-higher-education/405153

An Enterprise Ontology Based Conceptual Modeling Grammar for Representing Value Chain and Supply Chain Scripts

Wim Laurierand Geert Poels (2014). *International Journal of Conceptual Structures and Smart Applications* (pp. 18-35).

www.irma-international.org/article/an-enterprise-ontology-based-conceptual-modeling-grammar-for-representing-value-chain-and-supply-chain-scripts/120232

Taijiquan Auxiliary Training and Scoring Based on Motion Capture Technology and DTW Algorithm

Xia Feng, Xin Luand Xingwei Si (2023). *International Journal of Ambient Computing and Intelligence* (pp. 1-15).

www.irma-international.org/article/taijiquan-auxiliary-training-and-scoring-based-on-motion-capture-technology-and-dtw-algorithm/330539