

THE ROLE OF THE EXECUTIVE BRANCH IN THE REGULATION OF AI: THE EXPERIENCE OF JAPAN, UK, USA, AND LESSONS FOR BRAZIL^{1,2,3}

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ABSTRACT

Brazilian Congress has made remarkable progress in the discussion surrounding AI regulation. Notwithstanding the launch of the Brazilian Artificial Intelligence Strategy in 2021, it is apparent that Brazilian government lags behind countries such as Japan, the United States and the United Kingdom in terms of AI regulation and guidance. In this short paper we present a series of reasons why there should be an effort to close this gap, for the citizens' wellbeing, for the advancement of public services, and for the development of enterprises.

Keywords: artificial intelligence; AI; regulation.

1 INTRODUCTION

The recent launch of ChatGPT created a buzz around artificial intelligence (AI) in general, and large language generative models in particular. Famous personalities, like the entrepreneurs Elon Musk and Steve Wozniak, as well as AI experts, like Joshua Bengio and Stuart Russel, signed an open letter calling for a six month pause in AI development.

In the meantime, several countries are in a rush to develop AI regulations. The European Parliament has just approved its negotiating position on the proposed Artificial Intelligence Act.⁵ In Brazil, the Chamber of Deputies has approved the Bill 20/2021 regulating AI,⁶ while the President of the Senate has proposed the Bill 2.338/2023, prepared by a Committee of jurists.⁷

Given the nature of legislative processes, the approval of these legal instruments will require a significant amount of time.⁸ While considerable attention has been devoted to these legislative proposals, in this article we focus on AI regulation by the Executive branch. On the one hand, Brazilian Congress has advanced in

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5. "The Parliament will negotiate with the EU Council and the European Commission, in the trilogue process. The aim of a trilogue is to reach a provisional agreement on a legislative proposal that is acceptable to both the Parliament and the Council, the co-legislators. The Commission acts as a mediator, facilitating an agreement between the co-legislators. This provisional agreement must then be adopted by each of those institutions' formal procedures". Available at: <https://www.artificial-intelligence-act.com/>. Accessed on: June 18, 2023.

6. See: <https://www.camara.leg.br/propostas-legislativas/2236340>. Accessed on: June 18, 2023.

7. See: https://www25.senado.leg.br/web/atividade/materias/-/materia/157233?_gl=1*1ihmgt6*_ga*MzQzOTM2MTkyLjE2ODcxMTczMTk.*_ga_CW3ZH25XMK*MTY4NzExNzMyOC4xLjAuMTY4NzExNzMyNi4wLjAuMA. Accessed on: June 18, 2023.

8. The two proposals are very different. The Senate has established a Temporary Commission to analyse the Bill 2.338/2023. See: <https://legis.senado.leg.br/comissoes/comissao?codcol=2629>. Accessed on: Aug. 21, 2023.

the discussions regarding AI regulation, when compared to their international counterparts. Kubota and Lins (2022) have shown that Brazilian enterprises are relatively well positioned in adoption of AI technologies, when compared to their European counterparts.⁹ The Brazilian Artificial Intelligence Strategy has also great examples of AI adoption in the public sector (Brasil, 2021).¹⁰

On the other hand, the federal government seems to be lagging when compared to the countries analyzed in this article. In this paper, we present four reasons why this gap should be filled.

This article is organized as follows. The second section presents selected international experiences of AI regulation and guidance by the Executive. The third section presents reasons why the Brazilian Executive branch should be more active in AI regulation. The fourth section brings the concluding remarks.

2 SELECTED INTERNATIONAL EXPERIENCES OF AI REGULATION AND GUIDANCE BY THE EXECUTIVE

In 2022, two publications were released in Brazil, analyzing international experiences of AI regulation. Cueva et al. (2022) developed a benchmarking of AI regulation of a large group of countries. Melo et al. (2022) developed a benchmarking of AI regulation of the selected group of countries: the European Union, the United Kingdom, the United States, Australia and Japan. In this paper, we bring some information updated until 2023.

Japan and the United Kingdom were the countries with deeper studies on different models of regulation (Cueva et al., 2022). Habuka (2023) classified G7 countries in two groups regarding AI governance. The first group – comprised of France, Germany, Italy and Canada – is trying a holistic and hard-law-based approach, setting obligations and hard sanctions in case of violation. The second group – formed by Japan, the United Kingdom and the United States – follows a sector-specific and soft-law-based approach. Due to space constraints, in this section we focus on the latter group.

2.1 Japan

In 2019, the government published the Social Principles of Human-Centric AI, emphasizing three basic principles that could help Japan to realize the Society 5.0:¹¹ human dignity, diversity and inclusion, and sustainability. The document also set forth seven additional principles necessary for realizing a society with the three basic principles abovementioned: human-centric; education/literacy; privacy protection; security; fair competition; fairness, accountability, and transparency; innovation (Japan, 2019).

In July 2021, the government published the Governance Guidelines for Implementation of AI Principles, presenting “action targets to be implemented by an AI company, with the aim of supporting the implementation of the AI principles that is required for the facilitation of deployment of AI” (Japan, 2021, p. 3).¹²

Guidelines and policy recommendations regarding the protection and utilization of data, the promotion of fair contracts for AI development and data transfer, machine learning quality management have also been

9. Countries covered by Eurostat.

10. See an analysis of the strategies not only for Brazil, but also for Argentina, Chile, Colombia and South Korea in Chiarini and Silveira (2022).

11. “A Society that realizes Society 5.0 is a sustainable human-centric society that implements AI, IoT (Internet of Things), robotics and other cutting-edge technologies to create unprecedented value, and a wide range of people can realize their own well-being while respecting the well-being of others”. Available at: <https://www.cas.go.jp/jp/seisaku/jinkouchinou/pdf/humancentricai.pdf>. Accessed on: June 18, 2023.

12. It is interesting to note that the document was updated in January 2022, only six months after the first version.

published. There are also sectoral regulations regarding automated driving vehicles, credit amounts using data and AI, use of AI and drones for gas pressure inspections (Habuka, 2023).

2.2 The United States

In 2019, the government published the document *AI Principles: recommendations on the Ethical Use of Artificial Intelligence* by the Department of Defense (DoD), emphasizing the following AI Ethics principles for DoD: responsible, equitable, traceable, reliable, governable (The United States, 2019).

In November 2020, the USA Director of the Office of Management and Budget issued a memorandum for the heads of executive departments and agencies encouraging innovation and growth in AI and stating the following principles for the stewardship of AI applications: public trust in AI, public participation, scientific integrity and information quality, risk assessment and management, benefits and costs, flexibility, fairness and non-discrimination, disclosure and transparency, safety and security, interagency coordination (Vought, 2020).

In October 2022, the White House has issued the *Blueprint for an AI Bills of Rights* (The United States, 2022, p. 3), warning that:

systems supposed to help with patient care have proven unsafe, ineffective or biased. Algorithms used in hiring and credit decisions have been found to reflect and reproduce existing unwanted inequities or embed new harmful bias and discrimination. Unchecked social media data collection has been used to threaten people's opportunities, undermine their privacy, or pervasively track their activity – often without their knowledge or consent.

To tackle these treats, the document includes recommendations for: safe and effective systems; algorithmic discrimination protections; data privacy; notice and explanation; human alternatives, consideration, and fallback. Its framework describes protections that should be applied with respect to automated systems that have the potential to impact citizens' exercise of: civil rights, liberties, and privacy; equal opportunities; access to critical resources or services (The United States, 2022).

The General Services Administration has issued an *AI Guide for Government: a living and evolving guide to the application of Artificial Intelligence for the U.S. federal government*, a document targeting agency senior leaders and decision makers (Centers of Excellence, s.d.).

According to Schreck, Gomez and Charkoudian (2023) the landscape of AI regulation is less clear than in the EU or the UK scenario: “there are few hard and fast rules that US AI companies can look to in order to guide their conduct”. The main regulations worth mentioning are: the *Artificial Intelligence Risk Framework*, blogspots by the Federal Trade Commission¹³ and the *Guidance for Industry and Food and Drug Administration Staff*.¹⁴

2.3 United Kingdom

The UK has an Office for Artificial Intelligence, part of the Department for Science, Innovation and Technology. The country seems to be one of the most ambitious in its plans, with the Prime Minister itself stating that: “I want to make the UK not just the intellectual home, but the geographical home of global AI safety regulation” (UK..., 2023). He added that the tech sector was at the heart of his priority to grow the economy. UK has decided to split regulatory responsibility for AI between several bodies, which oversee human rights, health and safety, and competition (UK..., 2023).

13. See, for instance Atleson (2023).

14. See FDA (2023).

The UK established the UK AI Sector Deal in 2018, the National AI Strategy in 2021 and the policy paper A pro-innovation approach to AI regulation in March 2023 (The United Kingdom, 2023). We will focus the analysis on the latest.

On the one hand, the foreword by the Secretary of State for Science, Innovation and Technology emphasizes the goal to become a science and technology superpower by 2030. Another goal is that UK become the best place in the world to build, test and use AI technology. On the other hand, she acknowledges the need to address the several risks posed by AI and highlights the need to build trust by consumers, public services and businesses on the technology (The United Kingdom, 2023).

Instead of targeting specific technologies, the framework focuses on the context in which AI is deployed. The UK approach relies on collaboration between government, regulators and business, and, at first, they do not intend to introduce new legislation. They intend to monitor in real time how the regulatory framework is performing. The five principles that underpin the framework are: safety, security and robustness; transparency and explainability; fairness; accountability and governance; contestability and redress (The United Kingdom, 2023).

3 REASONS WHY THE BRAZILIAN EXECUTIVE SHOULD PROMOTE AI REGULATION AND GUIDANCE

On the one hand, AI can be used to improve the provision of public services, for instance, when citizens request information or need to fill out and search for documents. In the UK, AI is being used to improve the National Health System medical care and making transport safer (The United Kingdom, 2023). On the other hand, the first reason for the promotion of regulation is that AI can potentially exacerbate issues regarding service delivery, privacy and ethics (Mehr, 2017).

The second reason is the reality of the Brazilian *de facto* federalism. When it comes to issues related to technology, it is common for the Federal Government to take the lead in the deployment of many public policies. Therefore, Federal Government AI policies can have a good example effect on subnational entities.

The third reason is vertical regulation. As expected, both Bills in discussion in Congress are more conceptual in nature and would not detail sectoral AI regulation. This vertical regulation is traditionally developed by sectoral Ministries and regulatory agencies. Following the UK regulation framework, expert regulators are the best suited to understand risks in their sectors and can take proportionate approach to regulation of AI (The United Kingdom, 2023).

The fourth reason is that the three powers of government are heavy users of this technology. Large AI models are being deployed by government entities, exploring the huge amounts of data produced by the delivery of public services. Federal regulation should guide not only internal development of such models, but also procurement of AI services. Moreover, the government is also promoting the technological development of AI technology.^{15,16}

The fifth reason is that the Brazilian Artificial Intelligence Strategy (EBIA) proposes several sound strategic actions related to legislation, regulation and ethical use of AI¹⁷ (Brazil, 2021), but there seems to be a lack of implementation.

15. See: <http://www.finep.gov.br/chamadas-publicas/chamadapublica/705>. Accessed on: June 19, 2023.

16. See Silva (2023).

17. Actions related to promotion of ethical and transparent AI, mapping legal and regulatory barriers to the development of AI, identifying and mitigating risks of algorithm bias, developing data quality control policy, creating parameters for human intervention and review mechanisms in AI contexts, creating and implementing best practices or codes of conduct regarding use of data, encouraging traceability and promoting innovative approaches to regulatory oversight.

4 CONCLUDING REMARKS

On the one hand, Brazilian Congress has made significant progress in the discussion of AI regulation. Kubota and Lins (2022) have shown that Brazilian enterprises are relatively well positioned in adoption of AI technologies, when compared to their European counterparts. Brazil has also great examples of AI adoption in the public sector (Brasil, 2021). On the other hand, Brazilian government seems to be lagging behind regarding AI regulation and guidance, when compared to Japan, the United States and the United Kingdom. We have presented a series of reasons why there should be an effort to close this gap, for the citizens' wellbeing, for the advancement of public services, and for the development of enterprises.

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