LLMs for AI policies evaluation: discussing data sharing at *supra* national level

Abstract

Large Language Models (LLMs) possess remarkable capabilities in both analysing vast amount of data and generating coherent human-readable output. This makes LLMs invaluable tools for various applications, and in different sectors, including policymaking.

One notable application is in sentiment analysis, where LLMs can assess the effectiveness of policies from different perspectives. By analyzing sentiment, these models can identify which policies are effective and which are not, helping policymakers make informed decisions. Additionally, LLMs can evaluate the efficacy of policies by considering trade-offs and costs, providing a comprehensive understanding of their impact.

Such an analysis of different jurisdictional experiences on specifically AI policies has great potential, given the fact that different countries are adopting different approaches. However, challenges exist. Among others, data sharing among countries is limited, hindering comprehensive analysis. To address this, an international platform such as the United Nations could facilitate data sharing and analysis.

This paper addresses the relevance of *supra* national data sharing in relation to the deployment of LLMs for AI policies evaluation.

1 Introduction

The potential of LLMs in policymaking has attracted a lot of attention from stakeholders, including scholars. This potential can be harnessed to propel notable progress in environmental policy development, for example, as suggested by (Gao 2023), encompassing tasks like analysing policies, mining public opinion data, synthesising and extracting data, communicating findings, conducting literature reviews, drafting policy documents, monitoring legal compliance, and adapting policies to local contexts. Moreover, (Cao, Zhuang, and He 2024) discussed how conventional methods of managing extensive and intricate climate data typically present hurdles, requiring specialized expertise, but with LLMs, it is possible to address this obstacle by allowing individuals without technical expertise to readily access and comprehend climate datasets and simulations. By facilitating natural language interaction, stakeholders can effectively engage with the data and explore different policy scenarios.

Nonetheless, there are risks linked to employing LLMs, such as generating inaccurate or outdated information, potential political bias, and the inability to access confidential or restricted data during training (Gao 2023). Moreover, (Ziegler et al. 2024) underline the risks of using LLMs in marine policymaking, as they may exhibit biases favoring Western economic perspectives over those of developing nations. These biases can stem from foundational language models, connections to UN documents, and application design, and the authors call for more research on equity implications.

At the same time, the topic of AI governance is also on the spotlight, given the different approaches that countries are adopting (Perry and Uuk 2019).

This paper focuses specifically on the employment of LLM for the analysis of AI policies. First, it provides a granular overview of the potential use of LLMs for AI policies evaluation, identifying potential challenges and opportunities. Then, it addresses data sharing, identifying what data might be needed and how it could be analysed at *supra* national level.

2 The case for employing LLMs in AI policies evaluation

Various nations worldwide have adopted diverse approaches to regulating AI. For instance, the European Union (EU) is in the process of formulating draft legislation, while the United Kingdom (UK) has adopted a more pro-innovation and liberal stance. Given that AI is a rapidly evolving technology, it remains uncertain which approach yields greater benefits and what types of benefits are generated, whether economic or social. To assess the impact of different national and regional AI policies, leveraging LLMs could prove beneficial.

LLMs can analyse the effects of various AI policies by cross-examining different data sources. Additionally, considering complementary policies such as employment law, liability regulations, and intellectual property frameworks is crucial to contextualise the implications of AI approaches comprehensively. LLMs' ability to synthesize diverse datasets makes them well-suited for this multifaceted analysis.

However, realising this idea presents challenges and opportunities. Challenges include ensuring a high degree of structured data sharing among different jurisdictions (Tedersoo et al. 2021), overcoming potential data privacy concerns (Janssen et al. 2020), and maintaining the neutrality and accuracy of LLM-generated analyses. Furthermore, interpreting and integrating the vast amount of data generated by LLMs require sophisticated analytical tools and methodologies.

Despite these challenges, the opportunities are significant. A comprehensive analysis facilitated by LLMs could provide insights into the real-world impacts of AI policies across sectors and their influence on AI development, business operations, and public services (Verma 2022). By identifying best practices and lessons learned, policymakers can refine and optimise AI policies to maximise benefits while minimising risks and disparities.

Achieving this requires concerted efforts to address technical, legal, and ethical considerations surrounding data sharing and LLM usage. The next sessions will discuss data sharing and human oversight.

3 Discussing data sharing: what data? To whom?

A comprehensive analysis of the impact of AI policies using LLMs would require a diverse array of data sources.

First, the regulatory Frameworks. Detailed information on existing regulations and policies governing AI usage, including their scope, objectives, enforcement mechanisms, and any amendments or updates over time. This data would help assess the legal landscape and identify areas of regulatory divergence or convergence.

Additionally, sector-specific regulations: specific regulations and guidelines tailored to different industries or sectors, such as healthcare, finance, transportation, and education. Understanding sector-specific regulations is essential for evaluating the sectoral impact of AI policies and identifying sector-specific challenges or opportunities.

Policy implementation data, including compliance rates, enforcement actions, and reported incidents, offers insights into the effectiveness of AI regulations. Economic indicators, such as GDP growth and employment rates, help gauge the economic impact of AI policies. Social impact data, encompassing societal attitudes and equity implications, is crucial for addressing societal concerns. Lastly, technology development data, such as research activities and patent filings, is essential for assessing AI policies' effectiveness in fostering innovation.

All the data should be structured to allow the comparative type of analysis to be performed by the LLMs. International comparisons would provide insights into global trends, best practices, and potential policy benchmarks for guiding new policy development.

In summary, a comprehensive analysis of AI policies using LLMs would require a wide range of data sources, including regulatory frameworks, sector-specific regulations, policy implementation data, economic indicators, social impact data, technology development data, and international comparisons. Access to diverse and high-quality data is essential for generating meaningful insights and informing evidence-based policymaking in the rapidly evolving field of AI governance.

3.1 The need for an international platform and the potential role of the UN

From a data protection standpoint, challenges arise due to the sensitive nature of the data required for analysing AI policies. This includes personal data collected for compliance monitoring, incident reporting, and impact assessments, raising concerns about privacy, consent, and data security(Topham, Boscolo, and Mulquin 2023). Ensuring compliance with stringent data protection regulations, such as the GDPR in the European Union, while accessing and sharing such data across borders presents significant hurdles(Finck and Pallas 2020).

Geopolitically, challenges emerge from divergent national interests, regulatory frameworks, and geopolitical tensions that may hinder international cooperation and data sharing efforts (O'Hara and Hall 2021). Countries may be reluctant to share sensitive information, fearing loss of sovereignty or competitive disadvantage, particularly in strategic sectors like AI and technology (Khan et al. 2022). Moreover, geopolitical rivalries and power dynamics may complicate efforts to establish common standards and norms for AI governance on a global scale.

In light of these challenges, the United Nations (UN) can play a pivotal role as an international platform to facilitate dialogue and cooperation on AI governance. The UN's *supra* national and inclusive nature makes it well-suited to foster multilateral collaboration among nations with varying interests and regulatory approaches. By providing a forum for discussion, information exchange, and capacity-building, the UN can promote transparency, trust, and consensus-building in AI policymaking. Additionally, the UN can serve as a forum for the development of common frameworks, standards, and best practices for data sharing, privacy protection, and ethical AI deployment, helping to address concerns related to data protection and geopolitical tensions. The UN has already demonstrated its commitment to advancing global dialogue on AI governance, making it a promising platform for addressing the complex challenges at the intersection of AI, data protection, and geopolitics ('General Assembly Adopts Landmark Resolution on Artificial Intelligence | UN News' 2024). ◻

Ethical Statement

There are no ethical issues.

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