New rules?

Lessons for AI regulation from the governance of other high-tech sectors

Introduction

- AI adoption is surging across public and private sectors, impacting education, healthcare, and criminal justice.
- Growing demand for regulatory frameworks to address societal and systemic risks of AI.
- This report explores lessons from three established regulatory sectors: **Pharmaceuticals**, **Financial Services**, and **Climate Change**.

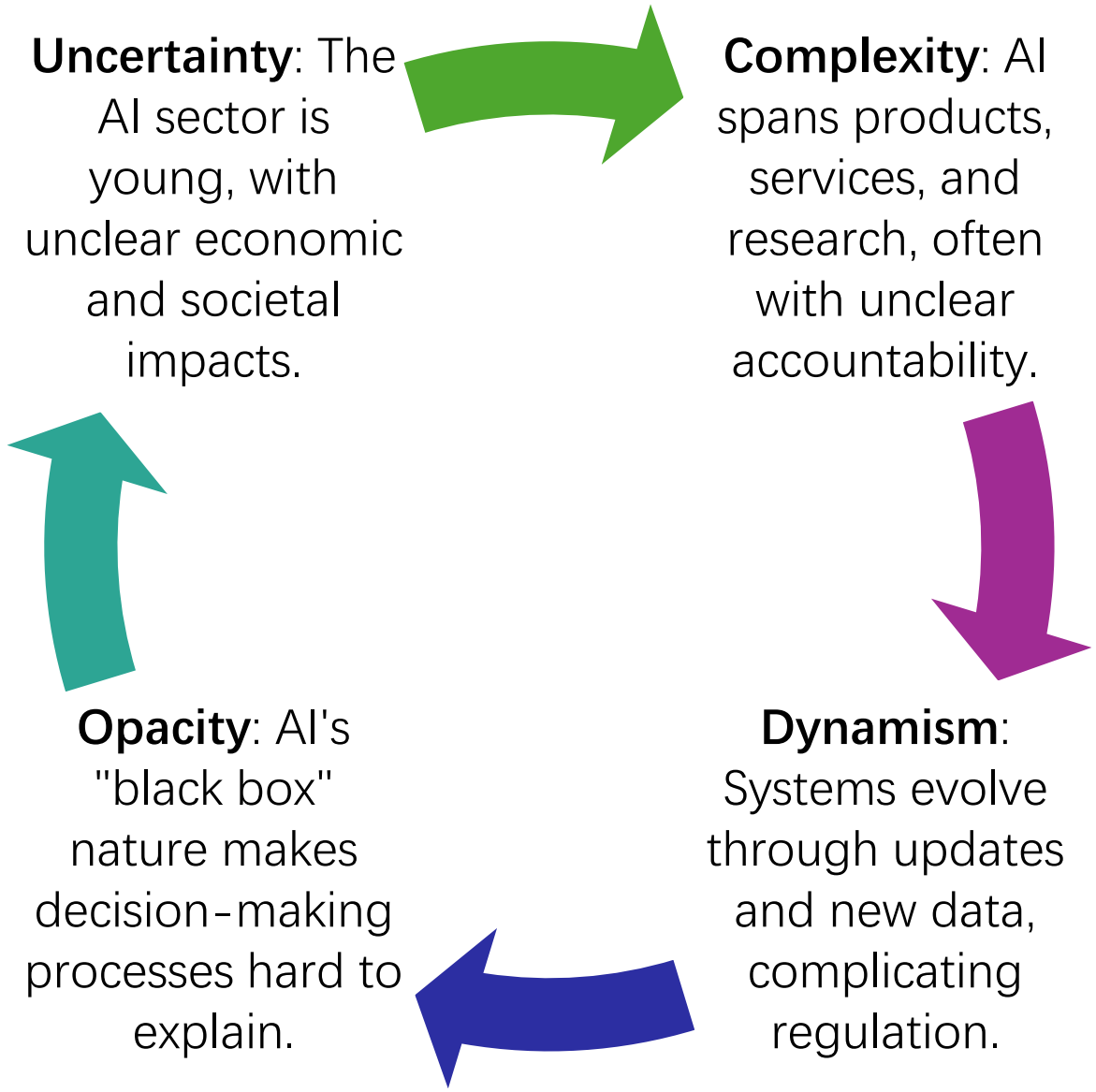
The Regulatory Challenge

Uncertainty: The AI sector is young, with unclear economic and societal impacts.

Complexity: AI spans products, services, and research, often with unclear accountability.

Dynamism: Systems evolve through updates and new data, complicating regulation.

Opacity: AI's "black box" nature makes decision-making processes hard to explain.



Case Study 1 - Pharmaceuticals

Goals:

- Safety, efficacy, and manufacturing quality.
- Enable innovation in drug development.

Mechanisms:

- Pre-market trials (phases I–III).
- Post-market monitoring (e.g., Yellow Card Scheme).
- Independent regulators (e.g., MHRA, NICE).

Lesson for AI: Create rigorous testing and monitoring for AI systems before deployment.

Case Study 2 - Financial Services

Goals:

- Consumer protection, market integrity, and systemic stability.
- Facilitate competition and economic growth.

Mechanisms:

- Stress tests for systemic resilience.
- Ex-ante and ex-post measures (fit-and-proper tests, accountability regimes).
- Independent regulators (e.g., FCA, PRA).

Lesson for AI: Develop assurance mechanisms like stress testing for AI risks.

Case Study 3 - Climate Change Mitigation

Goals:

- Reduce carbon emissions and achieve net zero.
- Foster long-term, systemic change across sectors.

Mechanisms:

- Carbon budgets and monitoring by the Climate Change Committee.
- Binding long-term targets (e.g., net zero by 2050).

Lesson for AI: Adopt iterative, adaptable frameworks for regulating evolving AI technologies.

Key Lessons from Other Sectors

Institutional Independence: Regulators must be free from undue influence.

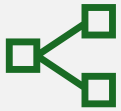
Monitoring and Iteration: Systems need constant oversight and adaptability.

Redress Mechanisms: Provide avenues for individuals to challenge harmful outcomes.

Balance of Objectives: Avoid conflicts between safety and economic goals.

Recommendations for Policymakers

Learn from cross-sectoral approaches.



Define clear goals and measurable metrics.

Ensure adequate funding and staffing for regulatory bodies.

Balance innovation with public accountability.

Challenges to Implementation

Global Competition: Risk of a "race to the bottom" in AI regulation.

Resource Constraints: Underfunded regulators may lack capacity.

Market Concentration: Small players may struggle to comply with regulations.

Thank you