

# Policy Governance and Artificial Intelligence (AI): Challenges and Options

Philip Haynes

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## Key findings

- AI offers governments major opportunities for economic growth and improvements in public services, especially health, care, education and transport.
- AI will be a major disruption to the labour market.
- There are risks that AI will
  - undermine human rights
  - increase inequality and unemployment
  - cause environmental damage through energy use.
- Governments across the world are considering policy options to govern and regulate AI.
- UNESCO has provided an important international analysis of options.
- The European Union's AI Act is the most detailed example of governance intervention at present.

## ABOUT DEFINITIONS

### What is AI?

Artificial Intelligence (AI) is the use of computer systems (hardware, software, networks and datasets) to process very large amounts of data to find previously undiscovered complex patterns that can guide and implement decisions and actions in the economic, technological, industrial and social world.

**'AI is the ability of a machine to display human-like capabilities such as reasoning, learning, planning and creativity...AI systems are capable of adapting their behaviour to a certain degree by analysing the effects of previous actions and working autonomously.'**

European Parliament (2020)<sup>i</sup>

<https://www.europarl.europa.eu/topics/en/article/20200827ST085804/what-is-artificial-intelligence-and-how-is-it-used>

**'They can find patterns where humans might not.'**

House of Commons Science, Innovation and Technology Committee (2023) page 3<sup>ii</sup>

### Policy Governance

Policy Governance is the design and facilitation of political, democratic, legal, professional and managerial interventions in economic markets and the social realm. These interventions are influenced by political ideology and values and aim to achieve desired social outcomes like the prevention of harm, public health and social justice.

Traditional public policy literature focuses on the words 'government policy'. This is widely interpreted by contemporary writings as being too narrow, given a primary focus on national and local political government and its decisions.

The modern focus on 'governance' expands the field of public policy to include the important contribution to the policy environment of many more actors and organisations in their differing ways. These diverse stakeholders can include public, private and non-governmental organisations, professional bodies, civil servants and managers, and the important influences of continental, pan-national, and international organisations and collaborations.

## THE AI REVOLUTION

### Opportunities

AI is seen by many commentators as offering unique historical opportunities to governments for delivering economic and social benefits to their populations.

These potential benefits include:

**Health care:** especially for administrative efficiency and effective diagnosis

**Education:** for better administration, effective personalised learning programmes and to support writing and language development

**Health and safety:** to automate the safer operation of complicated vehicles and equipment, for the prevention of accidents and serious injuries

**Financial and consumer markets:** for the automation and efficiency of digital transactions and information processes to enhance market competition

**Energy:** to reduce wastage in power generation and maximise the use of renewable energy.

*Nevertheless, there are political and academic concerns that these benefits may be offset by social and economic dysfunctions, as explored in this report.*

## Challenges identified

Policy makers need to work to prevent harmful and unfair public policy and market outcomes resulting from the implementation of AI<sup>iii</sup>

Negative impacts can include unequal economic and social outcomes.

Criminal and terrorist activity may use and distort AI for its own ends.

Algorithm design and limits to large datasets may result in outcomes that are racist, patriarchal and/or homophobic.

The hoarding of market information and associated algorithms can privilege some businesses over others leading to reduced competition and market distortions and failings.<sup>iv</sup>

Language learning models used in translation and international communication are advancing rapidly in dominant languages and cultures. This disadvantages minority languages and cultures.

AI can identify individuals and abuse their right to privacy and cause them related harms.

An individual can be deliberately misrepresented, for example, by the construction of 'fake news'.

Authoritarian government can use AI to easily identify individuals in ways that breach human rights and are unjust in outcome.

The algorithms, datasets and automated learning processes used in AI are not always transparent to enable accountability in their implementation and governance.

Designers and programmers cannot use perfect databases or foresee all possible scenarios<sup>v</sup>.

The existing international monopolisation of cloud data storage by a few transnational providers threatens competition and equitable outcomes<sup>vi</sup>.

This creates unequal access to data that includes personal information.

There can be inadequate protections and rights of data ownership, and a lack of privacy and redress for abuses.

Inappropriate or excessive governance may limit innovation and the positive potential that AI can have in areas such as health and education

An example of such a policy dilemma is the 'open-source challenge' where requiring open AI can facilitate harmful misuses. In contrast, allowing AI code to be propriety and private concentrates power and leads to monopolies.<sup>vii</sup>

AI requires a high use of energy and can have a negative environmental impact.

Economists and social scientists predict that AI will be a major disruptor of the labour market, like previous industrial and post-industrial revolutions.<sup>viii</sup>

There is a substantial risk of AI implementation causing high unemployment. There is a need for a large-scale upskilling of labour and most likely a greater need for income support and social protection.

AI is disrupting the weapons industry and developing new advanced weapons. There are major risks for increasing the ease for weaponizing disputes, the seriousness of conflicts, and the harm caused to civilians.

## POLICY GOVERNANCE

### Policy options

The United Nations Educational, Scientific and Cultural Organization (UNESCO) has identified nine different approaches to the governance and regulation of AI<sup>x</sup>. These are not mutually exclusive and can overlap in their implementation for specific policy areas.

These are:

#### Principles

Values guide the use of AI.

#### Standards

Organisations produce technical standards of practice.

#### Experimentalist

Governance works in collaboration with regulatory sandboxes and pilot projects to learn from new developments.

#### Enable

Governance encourages responsible, ethical and rights compliant AI

#### Law

Adapt existing law and regulation for AI.

#### Transparency

Require an openness about AI and its uses.

#### Risk

Require AI risk assessments in their specific contexts of use.

#### Rights

Require protection of individual rights.

## Policy in practice

A major concern is that policy governance cannot keep up with the speed and power of AI developments and fails in its tasks to regulate and maximise public and communal social benefits.

Some argue that the last two decades have seen extensive failures of government to regulate the rapid development of internet technologies and applications. Social media is accused of being highly dysfunctional in terms of its relationship with the spread of false information, anti-social disruption, the consequences for democracy, and its ability to be manipulated by organised criminals and terrorists.

One hope is that contemporary failures will become lessons learnt for the future, as the next wave of technological impact approaches.

### **What lessons can be learnt from the successes and failures of recent decades?**

North American and Chinese advances in technology innovation have contributed much to financial and economic growth in their countries, more so when contrast with Europe. It is argued that governance outside of the European Union favours risk and wealth creation, avoiding unnecessary and protective regulation. The counter argument is that this amounts to a lack of regulation with major negative social and economic consequences.

The European General Data Protection Regulation (GDPR) is perhaps the best-known international governance policy to intervene in the post millennium technological revolution.

It aims to protect private and personal data by giving consumers and citizens legal rights. Organisations have statutory duties to protect these rights.

The GDPR has resulted in substantial fines for major transnational technology companies including Meta, Amazon and Tik Tok<sup>x</sup>

### **Recent Policy Governance**

The European Commission and Parliament has moved to implement the AI Act.<sup>xi</sup>

This aims to get the right dynamic between encouraging technological innovation and economic growth and limiting the potential harms that AI can bring.

It does this by regulating based on the risk level of a specific use of AI.

An unacceptable risk means that AI is usually inappropriate and prohibited.

Examples are:

- Cognitive and behavioural manipulation
- Scoring based on certain social characteristics
- Biometric identification and categorisation, including facial recognition.

Applications that are acceptable but still high-risk must be adequately transparent, tested and evaluated, with citizens having some rights of protection.

Most lower risk applications will be subject to existing EU product regulations and requirements.

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## Notes and References

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