

AI Governance and Strategic Priorities: Mapping National AI Policies in the OECD

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ABSTRACT

As artificial intelligence (AI) continues to reshape economies, public institutions, and social systems, the need for coherent and accountable governance frameworks has become increasingly urgent. This study examines the strategic orientations and governance mechanisms embedded in national AI policies across OECD member countries, using a dataset comprising 1,884 policy initiatives recorded in the OECD AI Policy Observatory. Through descriptive and comparative analysis, the study maps the thematic focus, ethical commitments, funding structures, and oversight practices of AI governance at the national level. The results indicate a strong concentration of policy activity among technologically advanced countries, with Luxembourg (132), Germany (120), and France (108) leading in the number of initiatives. Thematically, 924 policies focus on national AI strategies, followed by digital economy (286) and science and innovation (232). In terms of operational focus, the most common policy areas include skills development (434), AI in public services (421), and research funding (409). Ethical principles are referenced inconsistently: transparency (481 mentions), human-centered values (431), and accountability (404) are the most cited, yet 7.4% of policies contain no ethical reference at all. Notably, only 23.7% of policies involve private sector funding, and a mere 9.3% report formal evaluation mechanisms, highlighting critical gaps in implementation, collaboration, and accountability. These findings reveal both progress and limitations in OECD-level AI governance. While policy frameworks are expanding in scope and ambition, the uneven operationalization of ethics, limited stakeholder engagement, and absence of robust evaluation processes suggest that current governance architectures remain incomplete. This study offers a foundation for further research and policymaking toward more inclusive, transparent, and adaptive AI governance models.

Keywords AI Governance, OECD, National AI Strategy, Ethical AI, Public Policy Evaluation

Introduction

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Artificial Intelligence (AI) has rapidly evolved from a niche field of computer science to a transformative general-purpose technology with far-reaching implications for economies, societies, and institutions worldwide [1]. Its growing capabilities, ranging from predictive analytics and natural language processing to autonomous decision-making, have enabled new applications in sectors as diverse as healthcare, finance, transportation, education, and government services [2]. While these advances promise significant gains in efficiency, productivity, and service delivery, they also present profound challenges related to ethics, accountability, transparency, and the protection of fundamental rights. As AI systems increasingly affect human lives and shape social outcomes, there is a growing consensus that their development and deployment must be guided by robust governance frameworks that are both forward-looking and adaptable to rapid technological change [3].

In response to these emerging challenges, governments around the world have

begun to craft national AI strategies aimed at steering innovation in ways that are socially beneficial, ethically grounded, and economically competitive. These strategies typically encompass a wide array of policy instruments, including public investment in research and development, regulatory guidelines, ethical principles, talent development programs, and measures to promote AI adoption across industry and the public sector. At the multilateral level, institutions such as the Organisation for Economic Co-operation and Development (OECD) have played a pivotal role in fostering global cooperation and policy alignment [4]. The OECD's adoption of the AI Principles in 2019 marked a major milestone in international AI governance, setting forth normative values such as transparency, robustness, fairness, and human-centered design as foundational to responsible AI development [5]. The OECD AI Policy Observatory was subsequently launched as a platform to collect, compare, and disseminate information about national AI policies among its member states.

Despite this growing policy activity, there remains a notable gap in empirical research that systematically analyzes how different countries within the OECD are translating AI governance principles into concrete national policies. While several studies have examined the content of individual AI strategies or explored thematic issues such as ethics, labor displacement, or competitiveness, few have undertaken a cross-country comparison using standardized data to map the strategic orientations, implementation mechanisms, and oversight structures that define AI governance at the national level. This lack of comparative analysis limits our ability to understand not only which governance models are emerging but also how coherent, accountable, and comprehensive they truly are in practice.

To address this research gap, the present study conducts a large-scale, data-driven analysis of AI policy initiatives documented in the OECD AI Policy Observatory. Drawing on a dataset of 1,884 policy records across multiple OECD member countries, the research aims to identify and compare national approaches to AI governance along several key dimensions: thematic focus, strategic priorities, ethical commitments, funding structures, and evaluation mechanisms. By mapping the landscape of AI policies across the OECD, this study seeks to illuminate both the diversity and the commonalities in how countries are designing institutional responses to AI. In doing so, it contributes to a more nuanced understanding of the global evolution of AI governance and offers insights for policymakers, researchers, and stakeholders seeking to build inclusive, responsible, and adaptive frameworks for the future of AI.

Literature Review

The emergence of Artificial Intelligence (AI) as a transformative technology has spurred significant academic and policy attention to the question of how it should be governed. AI governance encompasses the rules, principles, institutions, and mechanisms that shape the development and deployment of AI systems in ways that are socially beneficial, ethically sound, and economically inclusive. A growing body of scholarship addresses the challenges and opportunities of AI governance at national and international levels, yet the implementation of these frameworks remains uneven across jurisdictions. Floridi et al. propose an early and influential model of AI for social good, advocating that AI governance should be grounded in human dignity and democratic values [6]. Their framework promotes principles such as fairness, accountability, and explicability, calling for a multi-layered governance approach that involves governments, industries, and

civil society. Jobin et al. systematically compare 84 ethical AI guidelines worldwide and find that while there is convergence on core values (e.g., privacy, fairness, and transparency), there is little clarity on how to enforce or institutionalize those values, a concern echoed by Fjeld et al. in their global analysis of AI ethics documents [7], [8].

Several scholars have emphasized the implementation gap between high-level principles and actionable policy. Mittelstadt argues that ethical guidelines often fail to provide operational clarity and instead risk becoming tools for reputational management rather than substantive change [9]. Thao et al. similarly critique the vagueness of ethics-based governance and warn of the dangers of ethics-washing in both public and corporate AI strategies [10]. These critiques support the argument that governance must move beyond principles and incorporate concrete policy tools, enforcement mechanisms, and accountability frameworks. A number of comparative studies have attempted to map national AI strategies, identifying variations in priorities, institutional capacity, and stakeholder involvement. Gill in a report for the Center for Data Innovation, argue that successful AI governance requires both economic competitiveness and public trust, recommending that governments strike a balance between innovation incentives and risk mitigation [11].

Cave and ÓhÉigearaigh expand on this by noting that while some national strategies emphasize economic development (e.g., South Korea, the US), others prioritize social equity and inclusion (e.g., Canada, Finland) [12]. They emphasize that global coordination is critical but challenging, especially when national strategies lack transparency or evaluative mechanisms. In a similar vein, Taddeo and Floridi examine the fragmentation of AI governance and stress the need for international norms, institutional harmonization, and common evaluation practices [13]. Other works have focused on the role of institutions and multilateral frameworks. The OECD introduced its AI Principles, which are the first intergovernmental standard on AI and have since been adopted by over 40 countries [14]. The OECD AI Policy Observatory, launched in 2020, provides a structured and comparative view of AI policy instruments, serving as a valuable empirical resource [15]. However, few academic studies have leveraged this dataset to conduct systematic cross-country analysis. One exception is Veale and Borgesius, who argue that legal and governance frameworks are often reactive and siloed, calling for more integrated and adaptive governance approaches that include *ex ante* regulatory tools, risk assessment, and continuous monitoring [16].

In the area of evaluation and impact assessment, scholars such as Floridi et al. emphasize the importance of measurable accountability, proposing that explainability and oversight should be embedded in all stages of AI development and deployment [17]. Yet, as Whittlestone et al. point out, many existing policy documents lack concrete mechanisms for monitoring progress, correcting course, or including diverse public voices in decision-making processes [18]. Despite this expanding literature, there remains a lack of empirical research that systematically compares how countries operationalize AI governance principles across policy themes, instruments, and institutions. Much of the existing work focuses on individual strategies, theoretical debates, or normative critiques, while overlooking patterns across countries or categories such as funding structures, ethical commitments, and oversight practices.

This study addresses that empirical gap by analyzing a large dataset of AI policy

initiatives documented by the OECD AI Policy Observatory. By mapping the distribution, content, and structure of national AI policies across OECD countries, this research contributes to the literature by providing a comparative, data-driven account of how AI governance is being realized in practice, highlighting both common frameworks and persistent disparities in ethical integration, cross-sector collaboration, and institutional accountability.

Method

This research employs a quantitative descriptive and exploratory approach to analyze national AI governance initiatives across OECD member states, as shown in Figure 1. The goal is to identify patterns in strategic focus, ethical commitments, funding mechanisms, and evaluation practices documented in public AI policies. The study relies on secondary data obtained from the OECD AI Policy Observatory, comprising 1,884 individual AI policy entries as of the time of analysis. Each entry represents a distinct initiative reported by a member country, with fields that include country name, policy start date, AI themes, policy areas, ethical principles, private sector funding involvement, and the presence or absence of evaluation mechanisms.

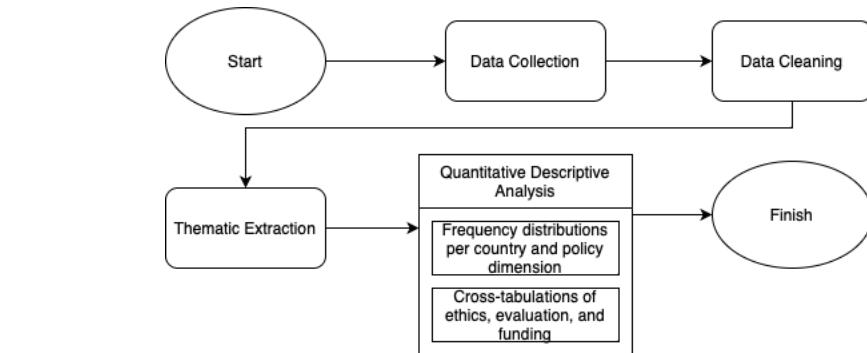


Figure 1 Research Method Flowchart

To prepare the dataset for analysis, a comprehensive data cleaning and transformation process was applied. This included handling missing values, correcting format inconsistencies, and expanding multi-label fields such as AI Policy Area(s) and AI Principle(s) into individual observations using text-parsing techniques. The cleaned dataset enabled aggregation across categorical variables and ensured analytical accuracy.

The core of the analysis is based on descriptive statistics, using three main quantitative measures:

Frequency (f): This measure was used to count how many times a certain category appeared in the dataset [19].

$$f_i = \sum_{j=1}^n x_{ij} \quad (1)$$

f_i Is the frequency of the category i , and x_{ij} an indicator function for the presence of the category i in the observation j .

Proportion (p): Proportions were used to express the share of a particular policy characteristic (e.g., private sector funding, evaluation presence) out of the total dataset.

$$p_i = \frac{f_i}{N} \quad (2)$$

p_i The proportion of policies with the characteristic i , f_i is the frequency, and N is the total number of valid policy entries.

Cross-tabulation and Conditional Proportion [20]: To compare policy features across countries or themes, cross-tabulations were generated, and conditional proportions were calculated:

$$p_{i|j} = \frac{f_{ij}}{f_j} \quad (3)$$

$p_{i|j}$ Is the proportion of policies with a feature i within a category j , f_{ij} is the joint frequency of i and j , f_j is the total number of policies in the category j .

The analysis also includes visual representations in the form of bar charts and proportion tables to support interpretation. These visualizations were created using Python's matplotlib and pandas libraries, allowing for efficient analysis of categorical data distributions across multiple variables. The primary analytical dimensions include: (1) policy volume per country, (2) dominant themes and policy areas, (3) reference to ethical principles, (4) funding structure, and (5) presence of evaluation mechanisms. This approach enables a transparent, reproducible, and scalable method for understanding how countries are structuring their national AI governance efforts. Although the study does not employ inferential statistics, the descriptive metrics provide a foundational overview for further hypothesis-driven or evaluative research.

Result

This section presents a comprehensive analysis of the current landscape of AI policy initiatives across OECD member states, utilizing data from the OECD AI Policy Observatory. The dataset comprises 1,884 entries that encapsulate diverse national approaches to AI governance, including policy themes, strategic priorities, ethical principles, and institutional frameworks. To ensure clarity and analytical coherence, the findings are systematically organized into thematic clusters and are accompanied by relevant tables and visualizations. These elements aim to elucidate patterns in AI policy formulation and highlight emerging trends in national-level governance.

The first dimension of analysis focuses on the distribution of AI policy initiatives by country, serving as a proxy for gauging the extent of national engagement with AI governance. The number of policy initiatives adopted by each country reflects not only the prioritization of AI within national development agendas but also the structural readiness of their institutions to implement such strategies.

As depicted in [figure 2](#), countries like Luxembourg, Germany, and France emerge as front-runners in terms of the volume of AI policies introduced. Luxembourg leads with 132 recorded initiatives, followed closely by Germany with 120, and France with 108. This pattern suggests a high level of institutional

commitment and strategic foresight in these countries, potentially driven by broader digital transformation agendas and innovation-oriented policy frameworks. The high concentration of policies in these countries also reflects robust inter-ministerial coordination, stakeholder engagement, and resource allocation mechanisms necessary for effective AI governance.

These results underscore the disparity in AI policy intensity across the OECD region, with some countries exhibiting substantial legislative and strategic activity, while others remain relatively nascent in their AI policy efforts. Such variation may stem from differences in technological maturity, economic priorities, or institutional capacities, which warrant further comparative investigation in future research.

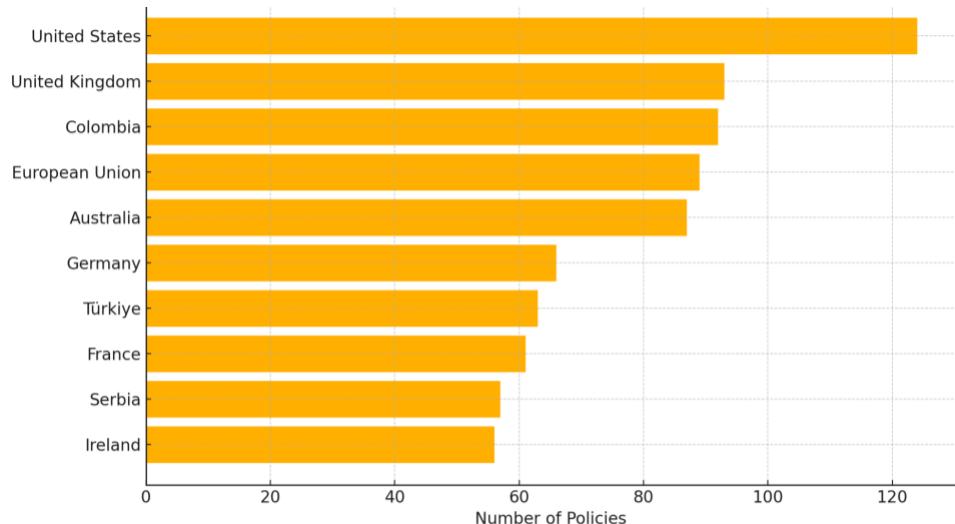


Figure 2 Top 10 Countries by Number of AI Policies

To complement the visual representation in [figure 2](#), [table 1](#) presents a precise enumeration of AI policy initiatives per country. The quantitative figures provide a clearer picture of how national efforts are distributed across the OECD landscape. Notably, the concentration of policies is particularly high among technologically advanced and economically influential member states, indicating a strong correlation between digital infrastructure maturity and the breadth of AI governance frameworks. These clusters of policy activity suggest that countries with established innovation ecosystems and robust institutional capacity are more likely to adopt a diversified portfolio of AI-related interventions, encompassing areas such as skills development, public-sector applications, and ethical AI deployment.

Table 1 Number of AI Policies by Country

Country	Number of Policies
Luxembourg	132
Germany	120
France	108
United States	94
Canada	91

United Kingdom	82
Spain	76
Japan	69
Italy	67
Sweden	59

Beyond the sheer volume of policies, the substantive focus of AI initiatives varies considerably across countries. Each policy encapsulates thematic priorities that reflect a nation's strategic orientation in approaching AI governance. These themes not only serve as guiding frameworks for implementation but also offer insight into the underlying motivations, ranging from enhancing economic competitiveness, accelerating digital transformation, to promoting equity and social inclusion through AI-enabled solutions.

As illustrated in [table 2](#), the most frequently recurring theme is “National AI Policies,” underscoring the growing trend among OECD countries to elevate AI as a central component of their long-term development agendas. This thematic dominance indicates that AI is increasingly viewed not merely as a technological innovation but as a strategic enabler of national progress, interlinked with other policy domains such as education, labor markets, and public administration. The prominence of this theme also suggests a desire among policymakers to establish coherent, centralized strategies that guide AI adoption across multiple sectors while ensuring alignment with international standards and ethical principles.

Table 2 Frequency of Policy Themes

Theme	Frequency
National AI Policies	924
Digital Economy	286
Science, Technology and Innovation	232
Education and Skills	172
Employment and Labour	87

While thematic categories offer a macro-level view of a country's strategic intent, the identification of policy areas provides a more granular perspective on the operationalization of these strategies. Policy areas delineate the concrete domains where governments channel their efforts, resources, and regulatory attention. These areas function as the implementation backbone of broader AI strategies, translating vision into practice.

As shown in [table 3](#), the most frequently targeted areas include skills development, AI applications in public services, and research and development funding. The prominence of skills development underscores a growing consensus that equipping the workforce with AI-relevant competencies is essential for sustainable and inclusive innovation. Similarly, the emphasis on AI for public services reflects the increasing use of AI technologies in enhancing administrative efficiency, service delivery, and evidence-based policymaking.

This clustering around human capital and public-sector adoption reveals a shared recognition among OECD countries that the success of national AI

ecosystems hinges not solely on technological innovation, but on the institutional capacity to govern, deploy, and scale AI in socially beneficial ways. By investing in people and infrastructure, these policies demonstrate a commitment to building AI systems that are not only advanced but also trustworthy, equitable, and impactful.

Table 3 Frequency of AI Policy Areas

Policy Area	Frequency
Skills development	434
AI in public services	421
Research and development funding	409
Data infrastructure	314
Public-private partnerships	247

In recent years, AI governance has evolved to place increasing emphasis on ethical considerations, reflecting a global shift toward ensuring that AI technologies are not only effective but also aligned with societal values. Ethical principles serve as normative guidelines that shape how AI systems are designed, deployed, and monitored, particularly in high-stakes domains such as healthcare, criminal justice, and public administration. Many national AI policies within the OECD explicitly reference such principles to build public trust, mitigate risks, and promote responsible innovation. As presented in [table 4](#), the most commonly cited principles include Transparency, Human-centered values, and Accountability. These principles are consistent with the OECD AI Principles and underscore a commitment to developing AI systems that are explainable, inclusive, and subject to oversight.

However, it is important to note that not all policies contain these references. The absence of ethical guidelines in a significant number of initiatives points to a degree of inconsistency in the institutionalization of ethical governance frameworks. This heterogeneity may be attributed to differences in regulatory maturity, cultural norms, or sectoral priorities across countries. The uneven adoption of these principles raises critical questions about the enforceability of ethical standards and the potential for policy fragmentation in international AI governance.

Table 4 Frequency of AI Principles Referenced

AI Principle	Frequency
Transparency	481
Human-centered values	431
Accountability	404
Robustness and safety	376
Fairness and non-bias	365

The funding structure behind AI policy initiatives provides important insights into the nature and extent of collaboration between the public and private sectors. Policies that involve private sector participation often benefit from resource

pooling, faster technological diffusion, and a stronger alignment with market dynamics. Such collaboration can enhance the scalability and adaptability of AI solutions, particularly in sectors like industry, healthcare, and finance, where innovation cycles are rapid and data access is critical. Despite these potential advantages, the dataset reveals a limited degree of private sector involvement. As shown in [table 5](#), only 23.7% of AI policy initiatives report funding from private sources. This suggests that the development and implementation of AI governance frameworks within OECD countries remain largely under the purview of government-led initiatives, with minimal financial co-investment from the private domain. This predominance of public-sector-driven governance may reflect both the strategic nature of AI as a public good and concerns over commercial influence in regulatory processes. However, the low rate of private engagement also raises questions about long-term sustainability, especially in countries with constrained public budgets or limited institutional capacity. The absence of robust public–private partnerships could hinder the broader diffusion of AI technologies, limit innovation potential, and slow down the integration of AI into economic and social infrastructures.

Moving forward, fostering balanced public-private cooperation with appropriate safeguards may be essential for creating inclusive, dynamic, and ethically aligned AI ecosystems.

Table 5 Proportion of Policies with Private Sector Funding

Has Private Funding	Proportion
False	0.763
True	0.237

Lastly, policy evaluation mechanisms play a vital role in ensuring the accountability, transparency, and continuous refinement of AI governance frameworks. Systematic evaluation enables policymakers to assess whether stated objectives are being met, identify unintended consequences, and adapt interventions in response to evolving technological and societal conditions. In the context of rapidly advancing AI technologies, the presence of such mechanisms is particularly important to ensure that policy remains effective, responsive, and aligned with ethical standards. However, the analysis reveals a critical gap in this area. As reported in [table 6](#), only 9.3% of AI policy initiatives in the OECD dataset have undergone any form of evaluation. This suggests that while countries have made considerable efforts in policy formulation and implementation, far fewer have developed or institutionalized structured processes for monitoring, reviewing, or assessing impact. The lack of evaluation may stem from several challenges, including limited technical capacity, insufficient data availability, or the relatively recent nature of many AI initiatives. Nevertheless, the absence of formal feedback loops undermines the potential for evidence-based policymaking and increases the risk of inefficiency, ethical blind spots, or unintended societal harms. Addressing this gap will require not only methodological frameworks but also political will and inter-agency coordination to embed evaluation as an integral part of the AI policy lifecycle.

Table 6 Proportion of Policies That Have Been Evaluated

Is Evaluated	Proportion
False	0.906

True	0.093
<p>Taken together, this analysis highlights a complex and evolving landscape of AI governance across OECD member states. On one hand, the proliferation of national AI policies, their diverse thematic orientations, and growing attention to ethical principles signal a strong and coordinated commitment to integrating AI into national development agendas. Countries are actively designing frameworks that span from workforce development to public-sector innovation, laying the foundation for comprehensive AI ecosystems. On the other hand, several critical gaps persist, particularly in the areas of private sector engagement and policy evaluation mechanisms. The limited involvement of private funding may hinder innovation, scalability and reduce cross-sector collaboration, while the near-absence of systematic evaluation weakens the capacity for iterative learning and long-term accountability. These limitations suggest that while OECD countries have made significant strides in the conceptualization and launch of AI initiatives, more work is needed to embed governance practices that ensure sustainability, inclusiveness, and responsiveness over time. Thus, the current trajectory of AI policy development in the OECD represents both progress and unfinished business, a foundation upon which more robust, participatory, and adaptive governance systems must be built.</p>	

Discussion

This study has examined the strategic directions and governance mechanisms of AI policy initiatives across OECD countries, drawing on a rich dataset provided by the OECD AI Policy Observatory. The results indicate that AI is increasingly treated as a central pillar of national development, with countries like Luxembourg, Germany, and France demonstrating a high volume of policy activity. This suggests a strong level of institutional maturity and a recognition of AI's transformative potential for economic competitiveness and public-sector modernization. The widespread adoption of themes such as "National AI Policies," "Digital Economy," and "Science and Innovation" reinforces the view that OECD governments are working to position AI as a long-term strategic asset. Policy areas such as skills development and AI deployment in public services further reveal a shared understanding that AI governance must address not only technological innovation but also human capital, inclusion, and service delivery.

Despite these advancements, the analysis reveals several structural weaknesses in how OECD countries are approaching AI governance. One of the most prominent concerns is the fragmentation of ethical implementation. Although many policies mention principles like transparency, accountability, and human-centered values, these references are not consistently integrated into regulatory structures or enforcement mechanisms. The uneven adoption of ethical frameworks suggests that while normative awareness is growing, operationalization remains limited. In many cases, ethical language appears more symbolic than binding, raising concerns about how these principles are applied in practice and whether citizens have meaningful channels to challenge or question AI-driven decisions.

Furthermore, the limited involvement of the private sector in AI policy design and implementation is striking. Only 23.7% of policies report any form of private sector funding, which implies that AI governance across the OECD remains

largely public-sector driven. While this approach can safeguard public interest, it may also restrict the innovation potential that comes from industry collaboration, particularly in fast-moving technical domains. A lack of structured engagement with private actors may result in regulatory frameworks that are out of step with real-world application, weakening both compliance and relevance.

Perhaps most concerning is the near absence of formal evaluation mechanisms. With only 9.3% of AI initiatives reporting any form of assessment or review, there is a clear accountability gap. Without robust evaluation, governments lack the feedback loops necessary to adjust policies, learn from implementation, and address unintended consequences. This weakness undermines not only policy effectiveness but also public trust, particularly in high-stakes areas such as predictive policing, healthcare automation, and algorithmic decision-making.

Taken together, these findings reveal a dual reality in AI governance among OECD nations. On one hand, there is considerable momentum in formulating comprehensive AI strategies that align with national priorities. On the other hand, critical components such as ethical enforcement, multi-stakeholder participation, and long-term accountability remain underdeveloped. For AI governance frameworks to mature, they must move beyond high-level ambition and embrace a more integrated model, one that embeds evaluation, empowers citizens, leverages cross-sector collaboration, and translates ethical principles into concrete institutional practice.

Conclusion

This study has sought to examine the governance structures and strategic orientations of national AI policies across OECD member states by analyzing a comprehensive dataset from the OECD AI Policy Observatory. The research demonstrates that artificial intelligence has become a central pillar in national development agendas, evidenced by the significant number of policy initiatives launched in recent years. Countries such as Luxembourg, Germany, and France lead in the volume and diversity of AI-related policy instruments, indicating a proactive approach toward shaping the trajectory of AI deployment in alignment with economic modernization, innovation, and digital transformation objectives. The analysis reveals that most OECD countries have recognized the importance of integrating AI into a wide array of policy domains, particularly through national AI strategies, investment in digital infrastructure, and the development of human capital. Skills development and the use of AI in public services emerge as dominant areas of focus, reflecting a strategic understanding that the effective governance of AI goes beyond the advancement of technology alone. It requires parallel efforts to build institutional capacity, promote public sector innovation, and ensure that human capabilities evolve alongside technological change.

However, despite the breadth of activity, the study also uncovers several critical limitations that may hinder the long-term success of these governance efforts. One of the most prominent gaps lies in the inconsistent integration of ethical principles within the policy framework. While many initiatives cite transparency, accountability, or human-centered values, these references are often superficial and lack enforcement mechanisms or regulatory depth. This calls into question whether such ethical commitments can be effectively translated into practice, especially in high-risk applications of AI. In addition, the minimal involvement of

the private sector in the funding and design of AI policies, evident in the fact that only 23.7% of policies report private sector funding, suggests an overly centralized and state-driven approach. While public leadership is essential for safeguarding societal interests, the absence of structured collaboration with industry may reduce innovation potential, limit practical relevance, and slow down the adoption of emerging technologies. More balanced public–private partnerships could foster not only resource efficiency but also regulatory coherence and market responsiveness.

Perhaps the most significant concern identified in this study is the lack of policy evaluation mechanisms. With only 9.3% of policies undergoing formal evaluation, there is a clear deficiency in accountability structures and learning systems that are vital for adaptive governance. In the absence of feedback mechanisms, governments may struggle to detect policy failures, unintended consequences, or changing social expectations around AI. This undermines the capacity of policy frameworks to remain relevant and effective over time, particularly in a domain as rapidly evolving and ethically sensitive as artificial intelligence.

In conclusion, while OECD countries have made considerable progress in constructing AI governance architectures that are strategically ambitious and thematically comprehensive, significant work remains to strengthen their institutional foundations. Future efforts must focus on deepening the operationalization of ethical frameworks, expanding stakeholder participation, particularly from the private sector, and embedding systematic evaluation into the AI policy lifecycle. Only by moving beyond policy declarations and toward robust, transparent, and adaptive governance mechanisms can national AI strategies fulfill their promise of guiding AI development in ways that are innovative, inclusive, and aligned with the public good.

Declarations

Author Contributions

Conceptualization: P.A.P; Methodology: G.B; Software: P.A.P; Validation: P.A.P; Formal Analysis: G.B; Investigation: G.B; Resources: P.A.P; Data Curation: G.B; Writing Original Draft Preparation: P.A.P; Writing Review and Editing: G.B; Visualization: P.A.P. All authors have read and agreed to the published version of the manuscript.

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The data presented in this study are available on request from the corresponding author.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

- [1] T. G. Mai et al., "Decoding a decade: The Evolution of Artificial Intelligence in security, communication, and maintenance within the construction industry," *Automation in Construction*, vol. 165, no. Sep., pp. 1–29, Sep. 2024. doi:10.1016/j.autcon.2024.105522
- [2] T. Yigitcanlar et al., "Artificial Intelligence and the local government: A five-decade scientometric analysis on the evolution, state-of-the-art, and emerging trends," *Cities*, vol. 152, no. Sep., pp. 1–21, Sep. 2024. doi:10.1016/j.cities.2024.105151
- [3] Y. Qian and X. Wan, "Co-experiencing with AI: Effects on social bonding and empathy in human-ai relationships," *Technology in Society*, vol. 83, no. Dec., pp. 1–11, Dec. 2025. doi:10.1016/j.techsoc.2025.103009
- [4] S. Nikfar and S. Mozaffari, "Organization for Economic Cooperation and Development (OECD)," *Encyclopedia of Toxicology*, vol. 7, pp. 157–165, 2024. doi:10.1016/b978-0-12-824315-2.00579-0
- [5] A. Castonguay, G. Wagner, A. Motulsky, and G. Paré, "Ai maturity in Health Care: An overview of 10 OECD countries," *Health Policy*, vol. 140, no. Feb., pp. 1–10, Feb. 2024. doi:10.1016/j.healthpol.2023.104938
- [6] L. Floridi et al., "AI4People—an ethical framework for a good AI Society: Opportunities, Risks, principles, and recommendations," *Minds and Machines*, vol. 28, no. 4, pp. 689–707, Nov. 2018. doi:10.1007/s11023-018-9482-5
- [7] A. Jobin, M. Ienca, and E. Vayena, "The global landscape of AI ethics guidelines," *Nature Machine Intelligence*, vol. 1, no. 9, pp. 389–399, Sep. 2019. doi:10.1038/s42256-019-0088-2
- [8] J. Fjeld, N. Achten, H. Hilligoss, A. Nagy, and M. Srikumar, "Principled artificial intelligence: Mapping consensus in ethical and rights-based approaches to principles for AI," *SSRN Electronic Journal*, vol. 1, no. Feb., pp. 1–39, Feb. 2020. doi:10.2139/ssrn.3518482
- [9] B. Mittelstadt, "Principles alone cannot guarantee ethical AI," *Nature Machine Intelligence*, vol. 1, no. 11, pp. 501–507, Nov. 2019. doi:10.1038/s42256-019-0114-4
- [10] P. Thao, Monique Mann, Declan Kuch, and Jake Goldenfein, "Economies of virtue – the circulation of 'ethics' in ai," *Economies of Virtue – The Circulation of "Ethics" in AI*, <http://dx.doi.org/10.25969/mediarep/19267> (accessed Jul. 4, 2025).
- [11] I. S. Gill, "Policy approaches to artificial intelligence based technologies in China, European Union and the United States," *Policy Approaches to Artificial Intelligence Based Technologies in China, European Union and the United States*, no. 26, pp. 1–28, Sep. 2020. doi:10.2139/ssrn.3699640
- [12] S. Cave and S. S. ÓhÉigearaigh, "Bridging near- and long-term concerns about ai," *Nature Machine Intelligence*, vol. 1, no. 1, pp. 5–6, Jan. 2019. doi:10.1038/s42256-018-0003-2
- [13] M. Taddeo and L. Floridi, "How AI can be a force for good – an ethical framework to harness the potential of AI while keeping humans in control," *Philosophical Studies Series*, vol. 144, no. Nov., pp. 91–96, Nov. 2021. doi:10.1007/978-3-030-81907-1_7
- [14] S. C. OECD, "An OECD Learning Framework 2030," *Arts, Research, Innovation and Society*, no. Dec., pp. 23–35, Dec. 2019. doi:10.1007/978-3-030-26068-2_3
- [15] D. Murdick, J. Dunham, and J. Melot, "Ai definitions affect policymaking," *AI*

Definitions Affect Policymaking, no. Jun., pp. 1–15, Jun. 2020. doi:10.51593/20200004

[16] M. Veale and F. Zuiderveen Borgesius, “Demystifying the draft EU artificial intelligence act — analysing the good, the bad, and the unclear elements of the proposed approach,” *Computer Law Review International*, vol. 22, no. 4, pp. 97–112, Aug. 2021. doi:10.9785/cri-2021-220402

[17] Floridi, Luciano, Josh Cowls, and Thomas C. King. "How to Design AI for Social Good: Seven." *Ethics, Governance, and Policies in Artificial Intelligence* 144 (2021): 125.

[18] V. Koniakou, “From the ‘Rush to ethics’ to the ‘Race for governance’ in Artificial Intelligence,” *Information Systems Frontiers*, vol. 25, no. 1, pp. 71–102, Jun. 2022. doi:10.1007/s10796-022-10300-6

[19] Y. Zhang et al., “Calculation formulas for natural frequency and critical speed of rotating beam and plate,” *Thin-Walled Structures*, vol. 216, no. Nov., pp. 1–16, Nov. 2025. doi:10.1016/j.tws.2025.113619

[20] A. Momeni, M. Pincus, and J. Libien, “Cross tabulation and Categorical Data Analysis,” *Introduction to Statistical Methods in Pathology*, no. Sep., pp. 93–120, Sep. 2017. doi:10.1007/978-3-319-60543-2_5