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The Political Economy and Geopolitics of Al Regulation

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Executive Summary

- Al regulation is now strategy-critical. Generative Al magnifies both value and societal risk, putting rule-making at the heart of competitive advantage.
- Current approaches are well intentioned but siloed, with some focusing on
 encouraging Al and others on setting perimeters on allowable activities. Most regimes
 focus on model design details or legacy legal "buckets," missing the real action in sectoral
 deployment and ecosystem power.
- Two national logics drive divergence. A handful of "supplier" superpowers (U.S., China) craft rules to nurture domestic model champions, while "adopter" nations prioritize safe uptake and data control—creating incompatible standards and regulatory arbitrage.
- Corporate influence shapes the field. Foundation-model labs and incumbent platforms use technical framing and lobbying to tilt policies in favor of vertical integration, raising barriers for entrants.
- Legacy rules for predictive Al cannot handle GenAl. New issues—training-data IP, synthetic data, Al-to-Al markets—require fresh doctrines on consent, ownership, and sector-specific accountability.
- If nothing changes, pathologies might emerge: issues such as global rule fragmentation, courtroom governance, regulatory capture, and irreversible ecosystem lock-in are likely to emerge—but many are preventable.
- A layered, modular framework is proposed as a way forward:
 - 1. Model-level safety and transparency
 - 2. Deployment-level sectoral oversight
 - 3. System-level controls on market structure and interdependence.
- Regulation should be seen as a staircase, not just a guardrail, a pathway rather than
 a barrier. By coupling contestability measures (interoperability, data access) with
 enablement tools (skills, public data, sandboxes), governments can spread Al's productivity
 gains while guarding against concentration and geopolitical vulnerability.





Abstract

Regulating artificial intelligence has become a first-order strategic battleground, yet most policy debates remain trapped in technology-centric silos. This paper develops a political-economy and geopolitical lens that explains *who* regulates AI, *how*, and *why*. We distinguish "supplier states" that pursue global influence through GenAI production from the majority of "adopter states" that focus on downstream use, and show how this divide, together with Big Tech's lobbying power, fragments the rule-set and endangers market contestability. Drawing on comparative policy evidence and corporate case material, we highlight three failure modes—regulatory drift, litigation-led rule-making, and ecosystem lock-in—and argue for a layered governance architecture that separates model-, deployment-, and system-level oversight while embedding sector-specific expertise. The framework equips executives and policymakers to treat regulation not merely as risk mitigation but as deliberate market design, aligning AI diffusion with broader economic and geopolitical objectives.



1. The Drivers of Al Regulation

As technologies reshape industries and redefine competitive dynamics, regulation is no longer an afterthought—it has become central to strategic advantage. Indeed, regulation is now "the new hot thing in strategy" (Jacobides 2023). Firms that once focused purely on innovation and execution must now contend with an increasingly complex and politicized regulatory environment. It is a landscape in which some actors challenge any move to regulate as innovation-busting, while others grapple with the need for certainty, collaboration, alignment, and checks on excessive power (Fenwick et al. 2018).

This is especially true in the digital and tech domains (Scognamiglio et al. 2025), where the rise of digital platforms and ecosystems has triggered intense regulatory soul-searching. These business models challenge traditional regulatory categories by blurring firm and industry boundaries, redefining market power, and introducing cross-sector dependencies (Lianos & Jacobides 2021, Gawer 2021, Rahman & Thelen 2019). Yet regulatory responses have often been reactive, fragmented, and outdated. Attempts to discipline tech power—such as the EU's Digital Markets Act, U.S. antitrust suits, or data sovereignty efforts—have struggled to keep pace with business models and technologies that evolve faster than legislation. Even well-intentioned regulatory moves risk irrelevance or unintended consequences (Caffarra et al. 2023, Kira & Glick 2022). The emergence of artificial intelligence (AI)—and in particular, the exponential rise of generative AI (GenAI)—has added a new layer of urgency and complexity to the regulation of technology.

As AI rules and regulation continue to proliferate and change, technologists and executives need a compass to guide their expectations for the future, and policymakers need distilled learnings to devise better paths forward. Both aims are served by a rigorous understanding of the ways in which regulation is shaped by the *political economy* and *geopolitics* of AI—particularly GenAI, which dominates current policy discourse and is catalyzing policy action most widely:

- 1. The political economy of GenAl comprises the complex interactions between regulators, businesses, and civil society, and how those interactions shape the trajectory of regulation. What gets regulated, how, and by whom is the result of a complex negotiation of interests and incentives between (i) policymakers under pressure to "do something" about Al, whether substantive or symbolic; (ii) leading tech firms seeking to influence outcomes under the banner of "responsible Al" while lobbying for flexible, innovation-friendly rules; (iii) traditional incumbents seeking protection or exemptions; and (iv) non-business societal actors typically advocating for stronger protections for consumers, SMEs, freelancers, gig economy workers and citizens from the potential harms of a disruptive technology.
- 2. The political economy of GenAl is primarily domestic, in the sense that it concerns the various actors that help shape regulatory choices within a given jurisdiction. However, such domestic dynamics must be situated within the broader *geopolitical* context. The regulation of GenAl will also depend on each country's geopolitical ambitions and vulnerabilities with respect to the technology. It is also affected by the power of Al



industry leaders, which can play governments off against each other and exploit their geopolitical ambitions as they seek to influence the regulatory outcome.

In this article, we offer a conceptualization of the political economy and geopolitics of GenAl as critical determinants of Al regulation more broadly. Rather than cataloguing legal updates or debating abstract principles, we identify the underlying forces and strategic dimensions shaping how regulation is designed, contested, and enacted globally, providing a broad perspective on the nature of regulation and state action. We also emphasize the importance of a seldom-appreciated difference in regulatory approaches between the few countries that are committed to being or becoming global suppliers of GenAl and the majority who lack such aspirations. By clarifying the key actors, motivations, and institutional logics at play, we aim to provide executives, policymakers, and technologists with a more actionable lens through which to engage this evolving—and increasingly consequential—terrain.

2. The State of Play

Our analysis zeroes in on GenAl for three reasons. First, GenAl has become the focal point of regulatory discourse because it dramatically increases the impact of Al as a family of technologies. Second, regulatory action on GenAl is particularly urgent given its competitive dynamics as an industry. Third, legacy Al regulation is inadequate for responding to the new challenges posed by GenAl. Below, we explain why these three facts jointly motivate the need to understand the geopolitics and political economy of GenAl in particular as key determinants of the future trajectory of Al regulation more generally.

2.1 Why GenAl Dominates Al Policy Discourse

Al's scope of impact is expanding from focused intelligence to strategic infrastructure. Al began as a highly specialized capability—automating predictions, optimizing logistics, filtering content. Early applications were function-specific and often confined to digital-native firms that had clean data, agile teams, and modular architectures. As Jacobides, Brusoni, and Candelon (2021) note, real impact came not from technical breakthroughs but from aligning Al tools with the structures and strategies of firms. Outcomes were determined by complementarity—between Al and organizational processes, data infrastructure, and regulatory settings.

Generative AI has shifted this dynamic. It is not just another productivity tool, but a class of technologies with systemic implications. By mimicking human expression and reasoning, GenAI extends AI's reach to broader cognitive and professional domains, particularly where creativity is involved. It blurs boundaries between content producer and consumer, between junior employee and automation, between human judgment and machine suggestion, between performance and understanding (see dell'Acqua et al. 2024 and Wiles et al. 2024). And, unlike prior waves of automation, the effects of GenAI are not isolated: they are diffuse, pervasive, and potentially compounding (Eloundou et al. 2024; Bick et al. 2024).





GenAl does not simply automate tasks; it can reshape workflows, displace skill hierarchies, and undermine longstanding indicators of expertise (Mollick 2024; Puranam 2025). In fields such as law, consulting, education, and software, where credibility and craft were once the preserve of trained professionals, GenAl challenges the signaling function of quality. It isn't just that GenAl significantly expands the range of capabilities for Al more broadly; it also dramatically lowers the barriers to use. The natural language interface effectively translates into dramatically democratized access to the technology and the types of tasks it can proficiently accomplish—as with so-called "vibe coding." GenAl presents the very real possibility of subtly but deeply redefining the infrastructure of knowledge work- a topic we're currently investigating in a related project.

Of course, the pace and magnitude of GenAl's impact on the economy is not merely a function of its technological potential; it depends just as much on what economic actors choose to do with it. Still, the systemic transformations that GenAl makes likely, or at least possible, do explain why policy discourse on Al is now largely dominated by generative models and the novel regulatory challenges they pose.

2.2 Why This Moment Matters

What makes GenAl regulation urgent is both the magnitude of this new technology and the unprecedented speed of its development—which, despite recent corporate rhetoric, might require us to act prudently but firmly to establish the contours of regulation. Government intervention can offer a complement to innovation in Al (Fenwick et al. 2018) and shape innovation trajectories, thereby engendering social benefits (Mazzuccato 2013). While such intervention does potentially chill innovative activity (Aghion et al. 2023), this aspect may have been self-servingly overplayed.

A key issue here is that while GenAl may be considered a General-Purpose Technology (McAfee 2024), it is not modular (Jacobides & Ma, 2025). It requires coordination within and across firms, and its success depends on how it can be embedded and how it will be complemented in practice. This, in turn, depends on several features. The first is the role of regulation in shaping the incentives for collaboration and coordination among firms (which is one reason why sandboxes are valuable). Second, GenAl implementation depends on other complementary activities and investments, which the state may be able to coordinate and encourage through innovation ecosystems (Adner 2017; Jacobides et al. 2018; Cusumano et al. 2019). Under high levels of uncertainty, market forces have limitations, even (and perhaps especially) when left free from regulation, as innovation won't necessarily lead to collaboration.

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¹ As Collingridge remarked back in 1980, there is a dilemma in such dynamic settings: to influence technology, intervention must occur early, before consequences are fully understood—yet if action is delayed, the technology becomes entrenched and resistant to change. It is important to stress that there is a broad view that right-sized regulation does not impede innovation; rather, by legitimizing its use and helping structure the underlying ecosystems, it often enables it, as Porter and van der Linde (1995) and more recently Qiu et al. (2018) find in the context of environmental regulation and innovation. Focusing on (early) Al regulation and fintech as a field of application, Fenwick et al. (2018) find that sandboxes and dynamic regulation (albeit enacted early) benefit society by creating robust contours of operation.



Furthermore, in fast-moving markets such as AI, with platform characteristics or massive economies of scale in particular parts of the sector (CMA, 2024), concerns arise over early action to map out the regulatory perimeter in terms of competition. Beyond concentration and power at the level of GenAI or foundation models themselves, though, there is a risk that GenAI exacerbates the "winner-take-most" dynamics already visible in digital markets (Jacobides & Ma 2024). Firms with scale, proprietary data, and systems integration capabilities look set to lock in advantages, while others will struggle to adapt. Regulation, if poorly designed, may further entrench this dynamic—by raising compliance costs, ossifying standards, or allowing capture by incumbents.

Conversely, well-calibrated regulation can serve as a *strategic equalizer*—by opening up access to data, clarifying rights and responsibilities, and ensuring that innovation does not outpace accountability. It can also reinforce national strategic aims by fostering domestic Al ecosystems, setting defensible norms, or providing leverage in international negotiations.

All too often, however, the current approach falls between two stools: it is too abstract to shape practice (and enforcement), yet too slow to respond to shifting conditions. What is needed is a more grounded, strategic view of Al regulation—not just as risk mitigation, but as *market design*.

2.3 The Inadequacy of Legacy AI Regulation

The evolution of AI from traditional predictive models to advanced generative systems has introduced multifaceted challenges that existing regulatory frameworks struggle to address. While early AI applications prompted regulations centered on data privacy, bias, and transparency, the emergence of GenAI brings forth intricate issues related to downstream usage and the ownership of training data. Understanding the implications of these novel areas for regulatory decision-making (including the decision *not* to regulate) is critical to a thorough understanding of the political economy of GenAI.

Early AI systems were primarily designed for specific tasks such as credit scoring, fraud detection, and medical diagnostics. These applications raised concerns about data privacy, algorithmic bias, and the explainability of AI decisions. Key regulatory responses included:

- **Data Protection Laws**: The European Union's General Data Protection Regulation (GDPR) emphasized individual consent, data minimization, and the right to explanation for automated decisions—a direction also followed by the EU AI Act.
- Bias and Fairness Guidelines: Regulators issued guidelines to address discriminatory outcomes in AI systems, particularly in sectors such as finance and employment, including signposting AI usage, as in the EU AI Act.
- Transparency and Accountability Measures: Requirements for documenting Al decision-making processes and establishing accountability mechanisms were introduced to build trust in Al applications.

The advent of GenAl, which is capable of creatingmulti-modal, human-generated-like output including text, images, and other content, presents new regulatory challenges that existing frameworks are ill-equipped to handle (Wachter 2024).





Intellectual Property and Training Data

GenAl models are trained on vast datasets, including copyrighted materials, raising significant intellectual property (IP) concerns:

- Legal Disputes: The lack of clear regulations has led to legal challenges, with courts being called upon to determine the legality of using copyrighted materials for Al training. Notable lawsuits include *The New York Times* suing OpenAl and Microsoft for copyright infringement, alleging unauthorized use of its articles to train Al models.
- Transparency in Data Usage: There is a solid argument for AI developers to disclose
 the sources of their training data, ensuring that copyrighted materials are not used
 without permission.
- Consent and Licensing: Establishing frameworks for obtaining consent and licensing
 agreements for the use of copyrighted content in Al training is essential to protect
 creators' rights, in keeping with the spirit and letter of the law even though Al
 developers argue that this will impede Al progress.

These issues highlight the inadequacy of existing IP laws in addressing the complexities introduced by GenAl technologies. Crucially, as synthetic data is expected to become more important for training future models, the window for regulation to make a tangible difference is closing fast.

Downstream Usage and Sectoral Integration

GenAl's capacity to generate anthropomorphic content raises questions about its integration into various sectors. First, there are significant *legal and ethical implications*. In sectors such as healthcare and law, the use of GenAl-generated content necessitates scrutiny regarding accuracy, accountability, and ethical considerations.² Second, there is an important and often under-appreciated role for *sector-specific regulations*. There is a growing need for regulations that address the unique challenges posed by GenAl in different åindustries, ensuring that its deployment aligns with sectoral standards and the public interest.³

² To illustrate, in 2025, in two High Court cases in England (Qatar National Bank and Harber v HMRC) valued at around £89 million, the claimant's solicitor submitted 45 citations, of which 18 were entirely fabricated, likely generated by AI tools, including ChatGPT. Many of the quotations themselves were also bogus. The claimant admitted relying on publicly available AI systems, revealing that some lawyers may now transfer AI-sourced content—as-is—into court filings. In another case, a pupil barrister cited five phantom precedents. As a result, Dame Victoria Sharp, President of the King's Bench Division, issued a strong admonition, warning that such misuse threatens the integrity of the justice system. She made it clear that presenting false AI-generated cases could result in contempt of court, police referrals, or even criminal charges for perverting the course of justice.

³ For instance, Microsoft and Nuance launched DAX Copilot, which uses GenAl to automatically draft clinical notes based on doctor-patient conversations. It aims to reduce physician burnout but introduces risks of omission, misinterpretation, or hallucination in clinical records. The challenge here is that medical records are legal documents with downstream implications for diagnostics, insurance claims, and malpractice, leaving a regulatory gap, as the FDA currently has no framework for regulating large language models used in documentation. Understandably, calls are mounting for the FDA



However, current regulatory approaches rarely have sufficient granularity to address these sector-specific concerns, leading to gaps in oversight, leaving the application of their use hanging in the balance—and also leading to a patchwork of solutions that will be difficult to align globally (Jacobides et al. 2024, Jacobides & Ma 2024).

Moreover, regulators need to contend not only with the interactions between humans and GenAl systems, but also among Al systems themselves—a scenario that will come to define many markets with the rise of so-called "Al agents." A world in which market transactions can eventually be carried out *among* machines poses entirely different challenges from one in which machines may mislead, deceive, or exploit humans.

Summing up, the transition from predictive AI to GenAI necessitates a re-evaluation of regulatory frameworks to address new challenges in downstream usage and data ownership.

3. The National and Corporate Logics that Shape the Al Regulatory Landscape

GenAl, like other Al technologies, operates across borders. Yet the policies governing Al are deeply rooted in national legal traditions, leading to a diverse global regulatory landscape. This diversity reflects differences in the domestic political economies of GenAl as well as the specific national interests, institutional capacities, and geopolitical ambitions of individual countries.

3.1 The Geopolitics of GenAl: Unequal Prospects and Divergent Approaches to Al Advantage

Just as GenAl expands the scope of Al's overall impact, so it also raises the geopolitical stakes. For the reasons described in section 2.1, GenAl has rightly become a vital policy concern as a driver of economic value, military advantage, and cultural influence. As a result, how countries choose (not) to regulate Al is, in the present context, largely a function of their national strategies as developed or revised in response to the rise of GenAl.

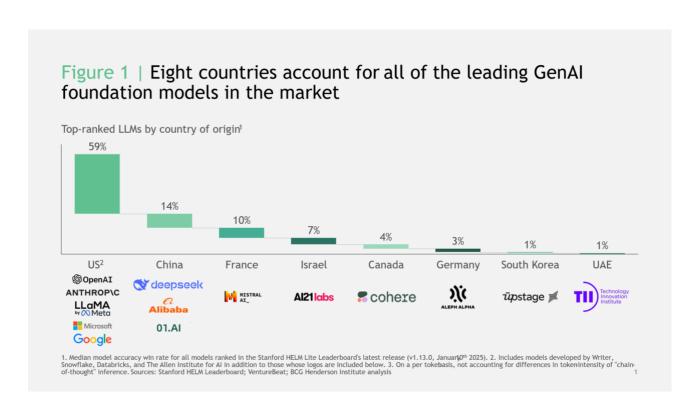
Firstly, the orientation of national strategies is shaped by the relative emphasis each jurisdiction places on consolidating a position in the *supply* of GenAl versus furthering the *adoption* of the technology on the demand side. While many countries profess an aspiration to become "Alsovereign," the reality in the GenAl paradigm is that this is unattainable for most. The technical complexity and capital intensity of GenAl development are such that very few countries are in a position to sustain a geopolitically salient role as suppliers of the technology. For the few that

and HHS to define safety, traceability, and auditability requirements for GenAl medical tools so they can deliver on their technical promise (Duggan et al. 2024).





can, regulation is as much about *fostering* a growing GenAl industry—particularly the development of foundation models—as it is about managing the risks involved in the use of the technology. For the rest, national strategies tend to focus more on *adopting* the technology safely and effectively, with little influence over how it is produced. All of the leading GenAl foundation models, as ranked in the Stanford HELM Leaderboard, hail from just eight countries, with the U.S. and China jointly accounting for nearly three-quarters of the total (Figure 1). It is no surprise that regulation in countries that supply GenAl technology is largely shaped by their interest in retaining and expanding their influence as producers of the technology, in contrast with the more defensive and reactive stance of countries who need only focus on its adoption and application.



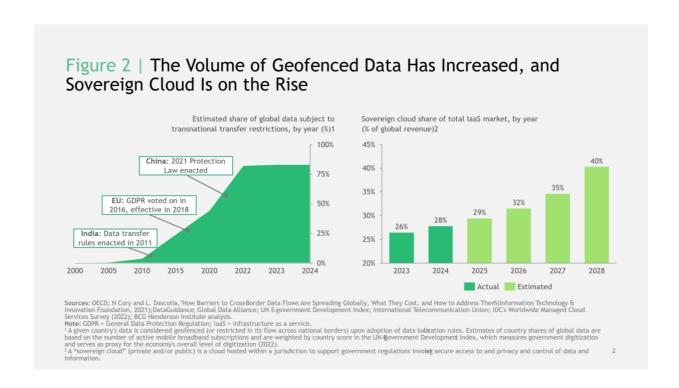
The GenAl supply market has significant barriers to entry. It remains costly and technically challenging to develop competitive foundation models, and serving them at scale demands significant computing power in the form of data centers optimized for Al workloads. A recent analysis by the BCG Henderson Institute (Lang et al. 2024) concludes that there are effectively two GenAl "superpowers"—the U.S. and China—plus a handful of "middle powers" with the potential to carve out a supply role: the EU, KSA, the UAE, Japan, and South Korea. This is not to say, however, that other countries may not emerge as important players. The UK, Canada, and Israel, for example, could translate strength in Al research into novel technical breakthroughs capable of delivering superior model capabilities. Indeed, the UK and Canada, for example, have produced some of the most influential Al innovations over the years. Still, at present, they lack the capital and computing-power scale to effectively compete in the global market for GenAl. Text Box 1 below presents a summary of where things stand in different geographies.



For countries focused on developing GenAl applications and furthering adoption, regulation is less focused on accelerating model development or containing the advance of geopolitical rivals than it is among GenAl "superpowers" and "middle powers." Rather, the emphasis is generally placed on "downstream" questions of safe and aligned use of the technology, as well as protecting the one strategic technological asset over which they have effective jurisdictional control: data. Precisely because "Al sovereignty" is practically unattainable for most, and because the stakes are very high when it comes to controlling GenAl systems, executives and

technologists should expect geopolitical dynamics to accentuate the years-long trends towards

rising data nationalism and computing-location requirements (Figure 2).



The significance for AI regulation of this divide between supply- and demand-oriented national AI strategies is well exemplified by the change in the EU's policy debate around AI.⁴ Bolstered by the Draghi report's (2024) call for a renewed focus on competitiveness, European regulators no longer see themselves as mere "takers", arbiters of a market dominated by foreign players, but also as actors capable of empowering European alternatives. The geopolitical stakes of the "AI race" are pushing EU actors to adopt a more "offensive" stance, not as mere "takers" of technology, but as *bona fide* contenders in the global market for GenAI supply. This change is

securing the EU's place in the global supply of GenAI.

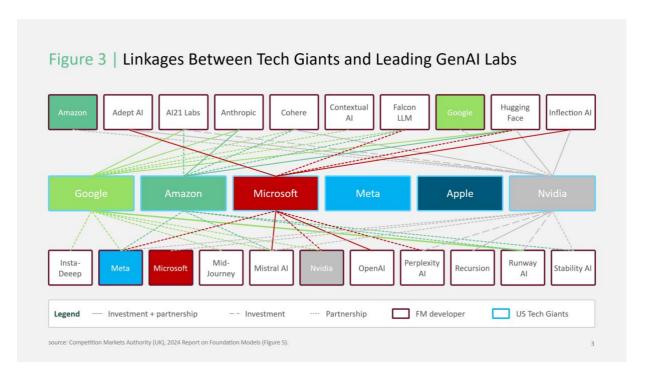
⁴ When the GDPR was adopted in 2016, the EU was in what might be characterized as a "defensive" position: It was essentially a consumer, not a producer, of the digital services it sought to regulate, with a primary focus on protecting consumers and safeguarding competition. There weren't at the time, and nor are there at present, viable European alternatives to the likes of Google, Microsoft Azure, AWS, Apple, or Meta. (U.S. GDP is only 15 times larger than the EU's, but its share of the total value of the 1,000 largest public technology companies is 18 times greater than that of the EU—\$24.7 trillion vs. \$1.4 trillion, respectively.) Things are very different with GenAl: not only are there European businesses contending in this space (like MistralAl), but also European policymakers recognize the geopolitical stakes in



poised to alter the trajectory of regulation itself as an instrument to encourage the development and growth of a robust European GenAl industry.⁵

3.2 The Political Economy of GenAl: Logics of Corporate Influence

Policymakers and regulators make decisions within the broader geopolitical context expressed in national AI strategies—but corporations, as the primary "targets" of regulation, are by no means passive recipients; on the contrary, they actively engage in shaping policies to align with their strategic interests. Corporations, particularly "Big Tech," are uniquely positioned to incorporate and scale AI capabilities owing to their advantages in terms of data, distribution, and cloud infrastructure. As a result, and unlike many other societal actors that play a role in the political economy of GenAI, corporate GenAI players enjoy an entrenched advantage that could freeze out competition—especially given incumbents' anxieties around the commoditization of GenAI models. In our view, tech businesses involved in the supply of GenAI are the leading non-state actors of the political economy of this technology, making them important "shapers" of AI regulation.



⁵ It is instructive to compare the EU's overall strategic position towards AI with that of Saudi Arabia and the UAE. Both Gulf countries are committed to economic diversification beyond fossil fuels; both see AI as a critical enabler of that transition. The UAE, through its National Strategy for AI 2031, has articulated a clear ambition to become a global AI leader. Similarly, Saudi Arabia's Vision 2030 strategy includes numerous initiatives directly or indirectly tied to AI. Governmental leadership has been central to igniting and sustaining the development of a vigorous AI ecosystem, taking advantage of the vast capital concentrated in state-owned enterprises and sovereign wealth funds. Investments have already started yielding results. While the two countries' AI workforces remain modest in absolute terms, they have grown at annual rates of 11% and 6% since 2022 in the UAE and Saudi Arabia, respectively. Furthermore, institutions such as the UAE's government-funded Technology Innovation Institute (TII) and G42 have produced world-class foundation GenAI models. In Saudi Arabia, government-owned Aramco has reportedly developed the world's largest industrial LLM, while the SDAIA developed the Arabic LLM family ALLaM. In these countries, government is not merely a regulator, but an active participant in the GenAI supply market.





A core challenge for AI regulation, then, is not just to ensure safety or fairness, but to create a contestable terrain. As Figure 3 shows, existing tech players are already positioning themselves to absorb new entrants and leverage AI to strengthen their hold on their own customers. A regulatory environment in which new entrants and innovative challengers have a plausible path to compete is, however, vital to ongoing innovation. But creating such an environment is especially problematic given the unparalleled ability of incumbent digital platforms to integrate GenAI across their service stacks—from cloud infrastructure and enterprise software to consumer search and productivity tools. Of course, depending on their positioning, distinct incentives, and capabilities, not all firms are equally keen to facilitate contestability, or equally capable of enabling or hindering it. But the structural trend (absent regulatory action) is clear enough: As GenAI becomes embedded in existing ecosystems, the barriers to entry for competitors grow steeper—even if they are on a par with incumbents in terms of core technology capabilities.

Corporate interests and actions and national strategies interact in complex ways, demonstrating the mutual influence of the geopolitics and political economy of GenAl. For countries keen on strengthening domestic suppliers of GenAl foundation models, there may be a trade-off between increased competition and enduring geopolitical advantage. This tension was arguably the most important implication of the release of DeepSeek's R1 model just a few months after OpenAl's pioneering o1 model—an indication that "fast followers" can very quickly catch up to "pioneers" in the GenAl foundation model development space. Whatever the cost of training a model like R1, the fact remains that it is 90% cheaper than o1 for the end-user (in terms of the cost per output token). This is great news for consumers of the technology, but a structural challenge for pioneering GenAl labs, which have spent billions developing novel architectures and engineering techniques that rivals can replicate within months at lower cost (Land & Zhukov 2025). This trend towards model commoditization against the background of geopolitical competition for GenAl supremacy helps explain the change of heart among leading western GenAl labs, which previously pushed for minimal-to-no regulation but now expect home governments to erect ever-higher barriers to foreign competition, as summarized in Text Box 2.

Crucially, the political economy of GenAl also involves the many businesses (and individuals) who rely on or are threatened by the technology; they are also vital participants in domestic policy debates. However, unlike tech giants, users have limited coordinated agency and are thus less able to advocate for and intentionally shape regulation—despite being vital to the creation of broader societal and economic value by means of technology. The challenge is that policymakers—inundated by pleas, clutching dwindling resources, and beset by an ever-expanding set of complex problems—are ill equipped to fend for those important but less powerful communities that will be affected by Al. Regulatory action is driven by history and existing silos, rather than any forward-looking agenda—especially in those complex terrains where there is a significant gap in technical expertise between those who are regulated (or who seek privileges) and those who have the unenviable job of setting the rules.

In all, the current AI regulatory landscape is marked by strategic divergence among countries engaged in geopolitical competition and varying degrees of corporate influence on policy, resulting in a fragmented global regulatory landscape that often overlooks critical aspects of AI integration and data governance. Addressing these challenges requires a concerted effort to





harmonize regulations, promote transparency, and ensure that AI development aligns with broader societal values and interests. At the same time, we need a more effective understanding of what the policy levers are when it comes to regulation, so that we can ensure that we focus on the ability of AI to have an impact—and consider how to manage its repercussions.





4. What Could Go Wrong

Al regulation is a tool to shape entire markets, manage complex economic transitions, and define legitimacy for a technology that is as promising as it is disruptive. Yet current regulatory debates and initiatives are misaligned with how Al is actually changing business and society—in part because they neglect the geopolitics and political economy of GenAl.

Regulation should center on uses, not tech

Regulatory focus has been so far overly wedded to the technology design choices of specific GenAl foundation models. We could call this the "tech-centric model." Adopting the tech-centric approach is an error, because rapid tech developments are likely to render regulation obsolete quickly and unexpectedly. For example, the Biden-era regulatory framework in the U.S., which other jurisdictions emulated, pegged levels of regulatory scrutiny to specific technological features such as the quantity of compute used to train foundation models (Exec. Order 14110, 2023, Section 4.2). But as the scaling of GenAl models shifted to new design approaches particularly the so-called "test-time compute" approach pioneered by OpenAI in 2024—rules focused on the magnitude of model training could no longer track the expanding frontier of Al capabilities, as was their stated aim. In this new paradigm of reinforcement learning, raw "FLOPs" - a count of math operations per second – suddenly mattered less than highbandwidth memory, a shift that made China's existing stockpile of Nvidia A800/H800 chips even more valuable and exposed the loophole in earlier US export controls. The lesson here is that regulatory efforts that remain anchored on a specific technical paradigm risk irrelevance as the technology continues to evolve. Stabler regulatory regimes should focus instead on what is likely to be done with technology in specific contexts.

Indeed, while policymakers fret about frontier capabilities, alignment with human values, and existential risk, the most immediate challenges come from the *application layer*: how AI is embedded in sectors, professions, and public services. Risk arises not just from what AI itself can do, but from what firms and institutions *do with it*. This includes opaque deployment in hiring, healthcare, finance, or law; the creeping erosion of accountability; and the consolidation of power in ecosystems where a handful of players control both the infrastructure and the use cases. As the recent report from London Business School / Institute of Directors / Evolution Ltd shows, the challenge is that regulators dwell on technology while business is already busy integrating AI into practice in particular lines of business (Jacobides et al. 2024, Jacobides & Ma 2024).

The tech-centric model also makes regulation vulnerable to profound informational asymmetries between regulators and the handful of tech giants "in the know" about the technology's frontier—and risks neglecting the vital perspective of corporate and personal users.

The inertia of regulatory silos

There is a mismatch between the current "buckets" of regulatory areas and the context in which Al is used. In most jurisdictions, regulation follows functional lines—data privacy, employment





law, consumer protection. But Al's impact transcends these boundaries. It shapes what counts as legitimate expertise, who has access to opportunity, and how decisions are made and justified. This redistributes value, alters the opportunity landscape, and introduces new types of concerns over fairness and risk alike. Rules that were designed to protect fairness, safety, or competition in legacy settings are being stretched—or bypassed altogether.

In a sense, what's needed is a regulatory perspective that has as wide a scope as the broader policy visions reflected in national AI strategies. Just as these strategies reflect intentional geopolitical "bets" informed by economic, security, and cultural considerations, so AI regulation should aim to encompass the overall societal and economic implications of a technology—instead of disjointedly resolving legal questions silo by silo.

Managing the implications of technologies that are highly technically complex and imperfectly understood will require experimentation in regulatory governance itself to create healthy lines of knowledge exchange between regulators and technologists. Of course, this is easier said than done, as illustrated by efforts such as the UK's AI Regulation Bill calling for the creation of a cross-cutting AI Authority.⁶

Now, for all of our excitement about a coordinated and thoughtful response, we must acknowledge—as social scientists have done for many years (Merton 1957, Selznik 1963)—that inertia on substance and administrative division of labor is likely to prevail. If current trends continue, we are likely to see a form of strategic drift defined by the following patterns:

1. National Fragmentation and Regulatory Arbitrage

Countries will continue to adopt divergent rules based on political traditions and lobbying dynamics. A few jurisdictions (notably the EU) may impose horizontal AI frameworks; others will default to sectoral or voluntary approaches. This divergence will open up arbitrage opportunities for global firms—deploying AI where regulation is weakest or slowest.

2. Courts, Not Legislatures, Will Shape the Rules

In the absence of clear statutory rules, IP disputes around GenAl (e.g., *The New York Times* vs. OpenAl; Reddit and GitHub user cases) will become precedents-by-default. This means critical questions about data rights and economic value will be decided through litigation, often in U.S. courts, rather than democratically or multilaterally.

⁶ The UK's proposed AI Regulation Bill, which is a Private Member's Bill (i.e., not a government-led effort) advocated by Lord Holmes, exemplifies efforts to address the challenges posed by GenAl, but also the pushback and forces that operate, and the need to respond. The Bill was introduced to ensure an equitable application of Al, which would balance the many opposing forces and overcome the UK's current fragmentation at the administrative and national level when it comes to Al. Unlike the EU AI Bill, it focuses on principles-based regulation—an approach the UK has also taken to competition matters in the digital realm, with the establishment of the Digital Markets Unit at the Competition Markets Authority (CMA), whose effectiveness in such a globalized context has yet to be determined. Such geopolitical issues can collide with the CMA's remit and engender political economy tensions given the CMA's firm stance on protecting competition and innovation in digital markets—which may have led to the hasty appointment of the former UK head of Amazon Web Services as its chair.



3. Corporate Capture of the Policy Agenda

Firms with foundational models will continue to shape global governance—via standard-setting, technical framing (e.g., "alignment" vs. "sectoral impact"), and self-regulatory "Al safety" pledges. As with platform governance a decade earlier, regulatory capture may occur not through corruption, but through *dependence*: public actors relying on private firms for expertise, infrastructure, and implementation.

4. Slow, Uneven Integration at Sectoral Level

Many governments will struggle to translate general principles into actionable sectoral guidance. Without strong horizontal coordination (or an empowered central agency), regulatory responsibilities will remain fragmented. The challenge here is that the greater the complexity and societal importance of a sector (e.g. health, law, education), the greater the regulatory burden and the harder it becomes to effectively leverage Al. Not coincidentally, these are the very sectors that have the potential to increase social welfare the most, making this slow and uneven progress particularly problematic.

5. Unintended Consequences Challenging Smaller Outsiders

One risk of AI regulation is that, like GDPR in Europe, if it is done without care and with an emphasis on regulating "all things AI" (as opposed to focusing on sector-level applications), it might impose an additional administrative burden that is manageable for larger firms but devastating to smaller, entrepreneurial firms.

6. Acceleration of Ecosystem Lock-In

If left unchecked, the trajectory of GenAl is likely to entrench *vertical integration* or *ecosystem control*, with a handful of firms controlling compute, models, deployment frameworks, and distribution channels. As the Figure 2 illustrates, this will shape not just who benefits from Al, but *how the economy is organized*, leading to significant problems with market power, rising inequality, and an ever more bifurcated model with a few, highly concentrated winners from Al and many others who may be challenged or out of a job. Understanding the dynamics of Al-induced disruption thus becomes a priority (Jacobides & Ma 2025).

7. Favoritism and Industrial Capture more than Policy

A final potential challenge is that rather than focusing on an effective industrial policy, local powers try to secure preferential treatment and protection. This may impede not only efficiency for final and intermediate users, but the very tech progress it is intended to foster. There is mounting concern, for instance, that tech firms are persuading governments such as the UK's that AI is "special" and should be exempt from IP obligations, where existing statutes might be applicable if effectively enforced. Likewise, the push for special privileges to "build AI advantage" through tax and other incentives may be hard to resist, as the calculus is a complicated one. Moreover, it is hard to strike tradeoffs between different dimensions of AI (such as safety and competition, current benefits vs. contestability from future challengers), and the sophistication and resources of interested parties vastly outstrip those of overstretched public authorities, making this an uneven match.



5. Looking Ahead: Principles for a More Effective Al Regulatory Regime

However likely strategic drift may be, it is still not destiny. We can and must foster a robust regulatory framework for AI that starts with a recognition of the geopolitics and political economy of GenAI in particular. Such a framework should have the following characteristics:

1. Layered and Modular

Regulation should distinguish between:

- o Model-level governance (safety, robustness, transparency)
- o Deployment-level oversight (use in sectors, professions, or services), and
- System-level integration (impacts on ecosystems, market structure, and interdependencies).

Each layer may in fact require a distinct governance structure with specific capabilities: deep technical expertise for the more technology-oriented model governance, strong links to industry for effective deployment-level oversight, and so on. The system-level integration layer will, we expect, grow in importance as agentic deployments of AI begin to carve out semi-autonomous marketplaces. For example, regulators will need to contend with the consequences for digital advertising markets of a potential shift away from Internet search and towards GenAI-based information aggregation, or as AI agents become the proxy "consumers" in various digital markets.

2. Sectorally Embedded

Many of the risks and opportunities of AI depend not on the technological design choices of the fundamental AI models themselves but rather on how they are embedded in *specific domains*. Regulation must work with—rather than outside of—existing sectoral governance (e.g., financial regulators, health bodies, education ministries) and upgrade them with AI literacy. While recognizing that GenAI is a general-purpose technology and that sectoral boundaries tend to fade out in an economy shaped by expanding ecosystems, the institutional infrastructure of regulation still happens largely at a sectoral level. This existing infrastructure can be an asset in designing regulation that focuses on the specifics of AI uses and applications in particular areas of the economy and society. AI will be everywhere, and while some cross-sector coordination is welcome, most of the focus should be on each sector separately.

3. Geoeconomically Aware

Effective regulation must anticipate how AI shifts value across borders, industries, and firms. That means aligning AI regulation with broader industrial strategy, competition law, and digital sovereignty policies—especially around data, cloud, and compute infrastructure. In fact, the scope of relevant policy may even include fiscal policy, which has been found to directly impact the economic case for accelerated technology deployments for labor automation (Brollo et al. 2024).

4. Explicit about Data and IP

Policymakers must confront the issue of training data ownership. This includes clarifying:



- What constitutes fair use of publicly available content
- Whether scraping data for model training requires consent or compensation
- How creators and publishers are compensated (as already seen in the mediatech negotiations in Australia, Canada, and France).
- Whether, and to what extent, IP rights extend to model-generated, synthetic data that may be used for further model training.

Emerging proposals such as the UK's AI Regulation Bill or the amendment tabled by Baroness Beeban Kidron in the Data Bill under discussion in May 2025 offer a partial template, especially their provisions requiring record-keeping of training inputs and IP. Yet, such obligations remain rare—and often vague—across jurisdictions.

5. Designed to Rein in Ecosystem Power

The UK Competition and Markets Authority's ecosystem mapping makes clear that foundational model providers (e.g., OpenAI, Google DeepMind, Anthropic) are increasingly central to how AI is integrated into downstream services. However, attention must be paid to broader ecosystem effects—especially as foundation models may end up becoming more utility-like, with power shifting elsewhere in the ecosystem. Therefore, effective regulation must:

- o Prevent ecosystem lock-in through interoperability standards
- o Ensure contestability in developer and deployment markets
- Address cross-leverage between adjacent domains (e.g., cloud + Al + productivity software)
- o Consider how AI is changing power dynamics in specific downstream markets.

Otherwise, the risk is a self-reinforcing loop where AI fuels further concentration of economic and political power.

6. Recognize Regulation as Enablement, Not Just Constraint;

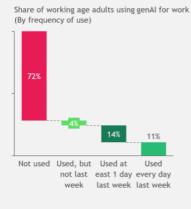
All too often, regulation is seen purely as a set of restrictions. But as the recent OECD/BCG/INSEAD (2025) study shows, governments can also shape AI adoption through positive incentives and facilitation. This includes support for training and skills, access to high-quality public data, simplified procurement, and advisory services to SMEs. Regulation by enablement—whether through targeted subsidies, infrastructure investment, or facilitative institutions—can help expand the productive diffusion of AI, especially in less digitally mature firms and sectors. This is particularly important given the relatively modest rate of *enterprise* AI adoption even in the most advanced economies, as indicated in Figure 4.⁷ We need to consider regulation and state intervention as *a staircase*, *not just a guardrail*, *a pathway rather than a barrier*.

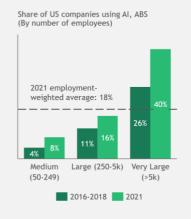
⁷ In another example of intent (which should be distinguished from achievement, in many of the pronouncements we have seen), Greece's recently published national AI blueprint proposes a model of how smaller states can use institutional design to enable—not just constrain—AI development, suggesting that policy entrepreneurship and institutional agility can help a latecomer shape AI outcomes through facilitation, not just control. We have seen this approach endorsed by













Sources: A. Bick, A. Blandin, and D. Deming, 'The Rapid Adoption of Generative AI," NBER (September 2024; n = 3,216); Nation! Center for Science and Engineering Statistics and U.S. Census Bureau Annual Business Survey 2022 (n - 4.7 million, data year 2021); BCG Digital Acceleration Index (DAI) 2023; K. Boney et al., 'Tracking Firm Use of AI in Real Time: A Snapshot From the Business Tiends and Outlook Survey' (NBER, April 2024; n = 165k employers); BCG Henderson Institute analysis

The window for shaping Al's institutional trajectory is closing quickly. The infrastructure is already being built. The power structures are already forming, on the global stage and within national economies. If regulation continues to "muddle through," it will not be neutral—it will entrench the incumbents, miss the redistributive effects, and leave critical questions to litigation rather than policy. It will also risk focusing too much on technology and the need to be seen to "do something," which may add a layer of bureaucracy without driving impact and miss the crucial issues of downstream application.

To avoid this outcome, policymakers must stop asking "What does AI do?" and start asking "What kind of economy—and society—do we want AI to enable, and how can we bring it about, sector by sector?"

Europe (illustrated by the EU AI Act's call for national sandboxes), and this raises the question of leveraging diaspora and choosing focused verticals. While any policy must be able to survive contact with administrative reality, the goal of regulatory facilitation and sector-specific diffusion under one cohesive framework should be maintained (HLACAI, 2024).





A brief overview of Al approaches around the globe

A recent analysis by the BCG Henderson Institute (Lang et al. 2024) argues that the supply-side map of the geopolitics of GenAl is defined by relative strength across six enablers required to become a supplier of intelligence: capital power, computing power, energy, data, talent, and IP. While ongoing policy changes, particularly in the U.S., are poised to reshape relative strength across some of these enablers (Lang et al. forthcoming), a cross-country comparison based clearly singles out the following set of primary actors:

United States: The U.S. maintains a market-driven approach, emphasizing innovation and technological leadership. Regulatory efforts are sector-specific, with a focus on voluntary standards and guidelines. Geopolitically speaking, the US is a clear GenAl "superpower," as it leads by a considerable margin across the critical enablers for the supply of this technology: capital power, computing power, energy, data, IP, and talent. The U.S. regulatory stance can be understood as a reflection of its structural strengths, notably the synergy between its venture capital ecosystem and large tech companies. Between June 2019 and March 2025, private VC investment in U.S.-based GenAl companies neared \$90 billion, compared to \$2.8 billion in the UK and just over \$3 billion in France and Germany combined. In 2023 alone, the 20 largest U.S. tech firms spent \$212 billion in R&D, compared to \$60 billion for their Chinese counterparts. This synergy is visible in the financial backing and output of leading GenAl labs in the U.S. As of March 2025, 64% of total funding for OpenAl came from Microsoft, and Amazon and Google accounted for 44% and 16% of total funding for Anthropic, respectively. The magnitude of U.S. capital power shows in its lead in top foundation models: Of all the LLMs ranked in the Stanford HELM leaderboard, 60% have been developed in the U.S.

China: China integrates AI regulation within its broader state-led industrial and ideological framework. Policies focus on aligning AI development with national priorities, emphasizing data sovereignty, and promoting domestic champions in the Al sector. As of today, China stands as the only other generative AI superpower alongside the U.S. and has rapidly narrowed the gap in recent months in terms of frontier model development. Today, its best models are overall on a par with those of the U.S. in terms of capabilities. China's approach to GenAl largely reflects its broader strategy of heavy state involvement and centralized coordination. As noted above, between 2019 and 2024, of the \$180 billion in venture capital funding directed toward AI, an estimated \$110 billion came from government-backed sources (Beraja et al. 2024), underscoring the dominant role of public investment. China also benefits from the strength of its public academic institutions and talent base: As of 2024, it hosted 45% of the world's top AI research universities. Tsinghua University alone has spun four of China's prominent "Al Tigers" - Zhipu Al, Baichuan Al, Minimax, and Moonshot Al. DeepSeek, now arguably China's highest-profile model provider, operates within the government-subsidized Hangzhou Chengxi Science and Technology Innovation Corridor. The company is believed to benefit from support via state-linked hardware distributors and the Zhejiang Lab, which China's Ministry of Science and Technology has called the "core soul" of building national strategic scientific and technological capabilities.

European Union: The EU is seeking to establish itself as a normative leader through comprehensive legislation such as the AI Act, which adopts a risk-based framework for AI applications. However, challenges persist in balancing innovation with regulation and in addressing rapidly evolving technologies like GenAI. From the perspective of the GenAI race—and technology more broadly—the EU has struggled to keep pace with the rapid advancements of the U.S. and China. At present, much of the EU's hope rests on Mistral AI, which accounts for approximately 10%





of the world's top large language models, according to Stanford's HELM Leaderboard. As of March 2025, EU-based GenAl startups have raised \$4.1 billion—just a fraction of the \$89.1 billion raised in the U.S. This is in part a reflection of decades of underperformance in tech: The combined market capitalization of the EU tech sector is just 1/18th of that of the U.S., and leading EU tech firms spend about 1/5th as much as their U.S. counterparts in R&D. However, recent initiatives, like the €200 billion AI investment commitment announced at the AI Action Summit in February, signal growing ambition. Through greater investment, the EU seeks to capitalize on its strength in talent and research, as it is home to the world's second-largest AI talent pool, with around 275,000 specialists as of 2024, and also leads in AI academic impact, producing the highest share of AI citations from 2019 to 2023. While much has been said about the stifling effects of overregulation in the EU (more broadly in tech than specifically in AI), its overall regulatory approach may also serve to foster demand for home-grown technology that is perceived as more trustworthy by EU residents and businesses.

Middle Powers: Countries such as Saudi Arabia, the United Arab Emirates, South Korea, and Japan are emerging as "GenAl middle powers," leveraging strengths in research, talent, and infrastructure to carve out niches in the global Al landscape. These nations aim to balance the influence of superpowers by fostering regional collaborations and developing indigenous Al capabilities. Middle powers have several pathways to position themselves in the GenAl landscape. They can form regional partnerships, as European countries have done through the EU; acquire capabilities by leveraging capital, as seen in the UAE and Saudi Arabia; or build on historical strengths, like South Korea and Japan with their tech conglomerates and skilled workforces.

A number of other countries, such as Singapore and India, have adopted national strategies focused on developing the so-called "application layer" of GenAl—that is, the development of use-case-specific applications that are built "on top" of foundation models. The Singaporean case is instructive in this regard, as it strongly emphasizes upskilling efforts (with the goal of tripling the number of Al practitioners in the country to 15,000 by 2029) and institutional infrastructure to accelerate adoption and value creation through the use of GenAl (by, for example, setting up Al Centers of Excellence to build and research GenAl solutions in partnership with leading corporations, and servicing SMEs and startups).





Patterns in the political economy of GenAl in particular and Al in general

Tech giants and GenAl labs looking to shape regulation: Leading technology companies invest heavily in lobbying efforts, standard-setting, and the development of ethical frameworks to influence Al regulation. By positioning themselves as responsible innovators, they aim to pre-empt stricter regulations and maintain competitive advantages. At the same time, pioneering GenAl labs (and the tech giants backing them) have strong incentives to further regulatory action that constrains competition from (often foreign, open-source) "fast followers" for the reasons discussed above.

Industry coalitions and ecosystem-building: Collaborative efforts among firms, such as those illustrated in Figure 3, aim to enhance the dominance of a small number of firms that leverage their strength in existing markets by integrating AI in their offerings. Challenger firms (such as SAP or Salesforce, or smaller entities integrating AI into their offerings) similarly try to provide an ecosystem structure through webs of inter-firm relationships that support their aims and shape the future of technology and its monetization.

Incumbents aiming to reduce exposure to increasingly unreliable global supply chains. Industry interests as well as national strategies are profoundly shaped by fragmented and interdependent supply chains, particularly for semiconductors—the material underpinnings of the entire digital economy. The geopolitics of GenAI, as well as the actions of major corporate players, are profoundly shaped by supply-chain interdependencies, of which leading-edge GPUs are a telling example. U.S.-based Nvidia virtually controls the global market for the most advanced GPUs—which are exclusively manufactured by the Taiwanese company TSMC with manufacturing equipment provided exclusively by the Dutch company ASML, and using raw materials sourced from across China, Japan, Germany, and the US. The Trump Administration withdrawal of the AI Diffusion Framework put in place by the Biden Administration speaks to the tensions that exist between the containment of geopolitical adversaries and the empowerment of corporate actors as sometimes mutually incompatible levers to advance national AI strategies.

Knowledge asymmetries reinforcing risk of regulatory capture: Policymakers' reliance on industry expertise can lead to regulatory capture, where regulations disproportionately favor incumbent firms, potentially stifling competition and innovation. The risk of regulatory capture is only exacerbated by the perception that GenAl labs alone have a clear view of the near-term technological potential—and its attendant risks and benefits. Such perception can result in excessive, if well-intended, deference to the forecasts and pronouncements of leading GenAl developers on the part of regulators.





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