



Beyond the AI Model Race – How Open Ecosystems Are Redefining the Future of Platform Competition

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INTRODUCTION

A new wave of competition has emerged in the generative artificial intelligence industry. In the past several years, technology companies such as Google and OpenAI have invested in significant amounts of financial resources, large-scale computing capabilities and advanced infrastructures to develop superior AI models. This has strengthened the presumption that technological superiority played a significant role in a company's success within the AI industry. However, DeepSeek's release in 2025 has challenged existing assumptions on AI competition by showing that highly capable models can be developed through innovative architectures with lower training costs (Guo et al., 2025). From a platform ecosystem perspective, this commentary argues that DeepSeek's technological innovations can be interpreted as a catalyst for broader ecosystem formation and participation (Cusumano et al., 2019; Parker et al., 2016).

DeepSeek gained significant global attention by demonstrating that competitive AI capabilities could emerge through a different strategic approach compared to established technology companies (Guo et al., 2025). Rather than relying solely on large-scale computational resources, DeepSeek combined architectural innovation, training efficiency and openness to reduce participation barriers and encourage broader ecosystem participation. Previous platform revolutions in smartphones, e-commerce and personal computing suggest that companies that focus solely on creating the strongest individual product may not always obtain long-term competitive advantage. Instead, sustainable competitive advantage increasingly depends on the ability to build, attract and orchestrate an ecosystem of users, researchers and businesses. This commentary argues that the future of competition in the AI industry will be shaped not only by technological capabilities but also by firms' ability to build, govern and orchestrate platform ecosystems.



SHIFTING TO THE INNOVATION PLATFORM

The platform ecosystem perspective changes the analysis on artificial intelligence companies. Traditionally, businesses create value using a linear model where companies develop products that are used by customers. However, digital platforms operate differently by facilitating interactions and creating value between multiple groups of participants (Cusumano et al., 2019; Parker et al., 2016). Based on this context, AI companies have evolved from technology providers to innovation platforms that allow external parties to develop complementary products and services. Unlike operating system platforms such as Android, DeepSeek functions as an innovation platform by combining open-weight foundation models, APIs, developer tools and community-driven contributions that collectively enable downstream innovation across multiple application domains.

Rather than building native applications directly on the platform, developers fine-tune models, integrate AI capabilities into enterprise systems and create downstream AI applications using DeepSeek's models and tools. By adapting models for domain-specific applications, developers, researchers, enterprises and open-source contributors collectively expand the platform's functionality, increase its usefulness for end users and create value beyond the capabilities of the platform owner. As enterprises adopt these applications and end users benefit from increasingly specialized AI solutions, value is co-created across the entire ecosystem rather than generated solely by the platform owner.

Application Programming Interfaces (APIs) are strategic mechanisms that strengthen collaboration between platform owners and their complementors. They allow external developers and organizations to integrate AI capabilities into their own applications, transforming AI models into digital foundations where innovation occurs beyond organizational boundaries. DeepSeek illustrates this transformation by enabling greater participation within the AI ecosystem. Instead of relying only on internal development, open AI ecosystems grant developers, researchers and organizations permission to experiment with their technology and expand its potential applications. This is similar to the theory of innovation platforms in which the owner provides the foundation for the platform and complementors multiply the overall value of the ecosystem (Cusumano et al., 2019). This pattern can be identified in earlier technology ecosystems such as mobile operating systems where the applications created by third-party developers contributed significantly towards the platform's success.

THE DYNAMICS OF NETWORK EFFECTS

Network effects played a key role in the battle between ecosystems. Traditional industries often determine a product's value through its internal characteristics such as price, quality or performance. However, the value of a platform increases as more participants join the ecosystem in platform markets (Parker et al., 2016). An increasing number of developers can create more AI-based applications to attract more users and businesses. In DeepSeek's ecosystem, complementors include independent developers, enterprise software providers, AI startups, researchers and organizations that integrate or fine-tune open-weight models for specialized applications. As complementors develop specialized applications and integrations, the platform becomes more valuable to users, attracting additional participants and reinforcing positive network effects. As more users begin to adopt the platform, the ecosystem would become more attractive for additional participants which would strengthen the growth cycle.



The emergence of AI platforms demonstrates that long-term competitive advantage does not solely rely on technological advantage. Without a strong ecosystem of users and complementors, a company with a highly advanced AI model would have limited impact. Therefore, the ability to generate positive feedback loops between different participant groups becomes a critical strategic advantage. However, in order to establish this ecosystem, the platform must solve the chicken-and-egg dilemma commonly faced by multi-sided platforms (Parker et al., 2016). Without a significant user base, developers are less likely to contribute to the platform. On the other hand, users may hesitate to adopt a platform without valuable apps and services. Therefore, platform operators must be able to attract different sides of the market simultaneously.

DeepSeek's cost-efficient model architecture and open-weight release significantly reduced participation barriers, enabling broader experimentation while simultaneously attracting early developers and organizations into the ecosystem. This strategy is also adopted by previous digital platforms where companies prioritized ecosystem expansion before focusing on monetization. Early adoption and participant engagement are determinants for sustainable growth in platform ecosystem competition.

THE GOVERNANCE DILEMMA: OPENNESS VS. CONTROL

However, openness does not guarantee platform success. Ecosystem governance becomes an increasingly important strategic challenge as ecosystems expand. The debate between open and closed AI ecosystems illustrates the tension between the freedom possessed by external participants and control maintained by platform owners. Several advantages of closed ecosystems include stronger control over security, quality and user experience. Maintaining more control would allow companies to establish clear standards and reduce potential risks. However, excessive control would also limit innovation from external parties as it would increase barriers for developers and complementors. On the other hand, open ecosystems may introduce challenges related to security, reliability and responsible usage although they enable greater participation and faster innovation. Therefore, the future of AI competition will be determined by the capability of the platform to balance both openness and control. Platform leaders must orchestrate the ecosystem by enabling innovation while maintaining effective governance to maintain trust among its participants (Cusumano et al., 2019; Tiwana, 2014).

Nevertheless, openness alone does not guarantee sustainable competitive advantage. Open ecosystems require continuous investment in computational infrastructure, governance mechanisms, model safety and regulatory compliance. In addition, open ecosystems may not always translate into sustainable competitive advantage if complementors fail to generate sufficient value or if governance mechanisms become ineffective. Furthermore, DeepSeek's ecosystem depends upon significant technological capabilities, including architectural innovation and training efficiency, that enable its openness. Technology and ecosystem development should therefore be viewed as complementary rather than competing sources of competitive advantage.

While Android represents an operating system platform that enables third-party applications to run directly on its infrastructure, DeepSeek represents an innovation platform centred on open-weight foundation models, APIs, developer tools and downstream AI integration. Apple maintained a closed ecosystem by exercising control over its software, hardware and application distribution which would allow the company to maintain consistency, security and a premium user experience. On the other hand, Google implemented an open ecosystem strategy through Android's expansion by enabling multiple developers and device manufacturers to participate in its ecosystem. Although both strategies contributed to the platform's success, their competitive advantages emerged from different types of platform orchestration



rather than their operating system alone. This pattern can be identified in the current AI industry where companies such as DeepSeek compete through their ability to attract complementors and govern platform ecosystems rather than solely through technological capabilities.

STRATEGIC IMPERATIVES FOR THE FUTURE

Long-term competitive advantage goes beyond rapid adoption and focuses more on sustainable ecosystem development for emerging AI platforms such as DeepSeek. Platform orchestrators must establish clear guidelines for developers, encouraging responsible innovation while ensuring that value is fairly distributed among its participants. A platform that only benefits its owner would risk demotivating the external parties that have contributed towards its growth. Similarly, AI companies should view competitive advantage as emerging from the combination of technological capabilities and effective ecosystem orchestration rather than from technological infrastructure alone.

The ability to coordinate relationships between multiple stakeholders has been historically proven to play a significant role in platform leadership. Companies that have successfully managed relationships between their users, developers, businesses and regulators have a stronger foundation towards long-term growth. Technological development remains the essential foundation of AI competition. However, its strategic value increasingly depends on how effectively firms can transform technological capabilities into collaborative digital ecosystems.

Therefore, the emergence of DeepSeek does not merely represent another competitor but rather a strategic shift in the digital competition. The future of AI development is likely to depend not only on who creates the most powerful model but also on who builds the most valuable and sustainable ecosystem. The integration of artificial intelligence into businesses and society reflects that the future winners are not simply model creators but they are architects with the capability of transforming technology into a platform that encourages continuous collaboration, innovation and value creation (Kranz, 2016).

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