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OPINION

DeepSeek and the trillion-dollar history lesson

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Opinion: DeepSeek and the trillion-dollar history lesson - The Globe and Mail

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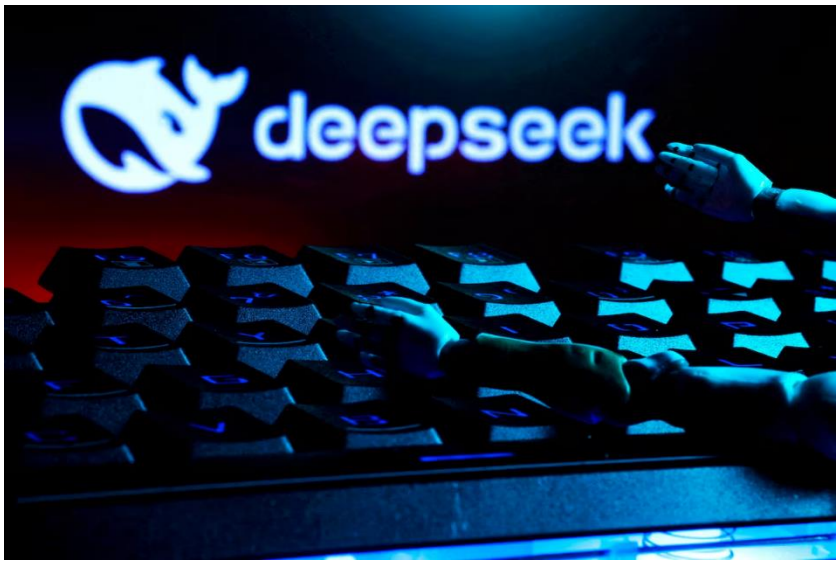

The deepSeek logo, a keyboard, and robot hands are seen in this illustration taken Jan. 27.

DADO RUVIC/REUTERS

At a conference in Toronto in September 2024, we led a select group of executives from finance, technology, regulation and policy making in a fascinating discussion focused on "Boom, Bust and AI." On the day of our gathering, the Dow Jones and the S&P 500 rose to all-time highs, powered in large part by huge gains in tech. Yet the bust was nowhere in sight.

The discussion turned to a familiar yet elusive theme: Do leaders ever truly learn to spot recurring signals in the evolution of technology and markets?

This week, we had our answer as the world witnessed a dramatic US$1-trillion correction thanks to DeepSeek, a Chinese AI breakthrough that delivers impressive performance on what it says is a fraction of the computational resources of its AI rivals. As soon as investors understood what that meant for established assumptions, AI-focused valuations – Nvidia's among them – took a massive hit.

In terms of historical analogy, what narratives fit, and which ones were appropriate in the event? That's the trillion-dollar question. Precedent reveals that there is a recurring pattern: euphoric big bets on emergent technologies, followed by overinvestment.

DeepSeek's breakthrough exemplifies how technological disruptions can emerge during a boom phase, destabilizing existing players and creating new economic dynamics, potentially setting the stage for both a bust and eventual regeneration. This regeneration enables smaller, resource-constrained players to compete, and forces established giants to adapt – a pattern seen in the wake of the dot-com crash.

The length of time of each phase varies, of course. Even with Monday's decline of 17 per cent, or $US23.24, NVIDIA stock still closed above US$120 a share. The stock is still near its all-time high, having risen from US$20 a share two years ago. The wider stock market remains even closer to its all-time high. But it is helpful to look at the current situation through the lens of the dot-com crash nonetheless.

DeepSeek's success could signify the beginning of an AI "democratization" cycle akin to past technological shifts, such as the rise of affordable personal computing in the 1980s or open-source software in the 2000s. These periods often challenge existing monopolies, democratize access, and fuel both chaos and creativity, ensuring long-term economic growth despite the initial turmoil.

In the late 1990s, the dot-com boom created countless millionaires on paper before cratering. A National Bureau of Economic Research survey suggests that nearly 80 per cent of technologies undergo boom-bust cycles before stabilizing. The sudden course-correction triggered by DeepSeek is a typical example.

Instead of investing heavily in incremental improvements to large-scale systems, companies and venture capitalists now must contend with new techniques that slash costs and challenge the perceived inevitability of resource-intensive models.

What are the lessons for decision makers? Leaders often fail to anticipate such pivots, in part because they tend to overlook signs of strain in existing processes. Consulting playbooks and popular frameworks like the Gartner Hype Cycle typically promise that every technology will pass through an inevitable trough and then rebound. Yet many proposed "game-changers" never make it out of that trough.

As the technology scholar Jeffrey Funk has argued, a mismatch between overblown projections and practical constraints can lead to billions of dollars in sunk costs. When companies pivot too aggressively toward the apparent "next big thing," they risk locking in massive expenditures that become difficult to unwind if the innovation – or its timing – proves less certain than anticipated.

None of this means the future is grim, or that optimism is unwarranted. One big lesson of the past is that decision makers should build better pattern-recognition skills, acknowledging that no cycle of technological investment is immune to abrupt changes in direction. Boards and executives might benefit from weaving these lessons into their strategic planning. The DeepSeek episode is less a once-in-a-generation bolt from the blue than it is the latest demonstration of how capital and innovation can collide in unpredictable ways.

By studying recurring signals in past disruptions – whether they took root in mechanical inventions, digital transformations or AI – leaders can avoid repeating the worst errors of hype-driven euphoria. The trillion-dollar history lesson triggered by DeepSeek might ultimately serve as a valuable reminder that breakthroughs seldom follow a straight line. While no road map can guarantee a smooth ride, any effort to anticipate what might come next is stronger if it begins with a clear-eyed sense of why we have so often been caught off guard before.