

Computing power infrastructure curbs corporate financialization, study finds

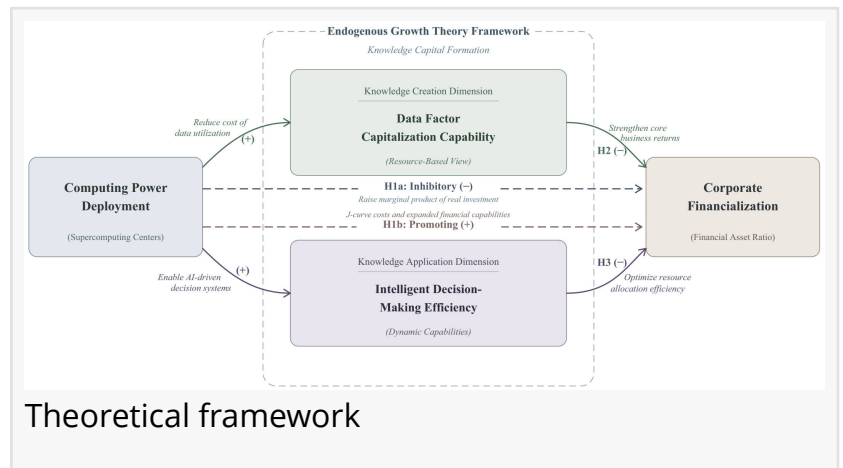
GA, UNITED STATES, September 21, 2026 /EINPresswire.com/ -- For decades, nonfinancial firms worldwide have increasingly diverted capital from productive investment into financial market activities—a trend known as corporate financialization that can suppress innovation, R&D, and long-term competitiveness. A new study investigates whether computing power infrastructure can reverse this pattern.

Using Chinese A-share listed companies from 2012 to 2023 and exploiting the staggered establishment of National Supercomputing Centers ([NSCs](#)) as a quasi-natural experiment, the research finds that city-level computing power deployment significantly reduces corporate financialization. Firms in NSC host cities reduce their financialization level—measured as financial assets to total assets—by an average of 1.1 percentage points, equivalent to roughly 17.5% of the sample mean.

The causes of corporate financialization have been extensively studied from both macroeconomic and microeconomic angles—from policy uncertainty and monetary conditions to ownership structure and managerial incentives. Yet the role of technological infrastructure in shaping firms' asset allocation decisions has remained largely unexplored. Given these gaps, there is a need for systematic research into whether and how access to high-performance computing alters the relative attractiveness of financial versus real investment.

Now, researchers from Central University of Finance and Economics in Beijing have published (DOI: [10.1186/s40854-026-00946-5](#)) findings in Financial Innovation (June 2026) showing that computing power infrastructure—specifically the establishment of National Supercomputing Centers—significantly inhibits corporate financialization. Using data from Chinese A-share listed companies spanning 2012 to 2023, the team employed a staggered difference-in-differences model to establish causality, treating the phased rollout of 14 supercomputing centers across China as a quasi-natural experiment.

The study identifies two distinct mechanisms driving this effect. First, computing power



enhances data factor capitalization capability: firms gain the technical capacity to convert raw operational data into commercially valuable assets, strengthening core business returns and raising the opportunity cost of diverting funds to financial markets. Second, it improves intelligent decision-making efficiency: big-data analytics and AI-powered systems reduce operational uncertainty, optimize capital allocation, and lower management costs. Together, these channels weaken the speculative arbitrage motive for holding financial assets. Importantly, the inhibitory effect is concentrated in speculative financial assets, while the coefficient for precautionary financial assets is statistically insignificant, suggesting that reasonable liquidity management is largely unaffected.

The effect is more pronounced in computing-intensive industries, where the estimated reduction in financialization is larger and the between-group difference is statistically significant. It is also larger among firms with low analyst coverage, although the between-group difference does not reach conventional significance levels. These patterns suggest that the marginal gains from improved data processing are largest in computing-intensive industries and in firms with weaker external information environments.

The researchers also found that the released funds flow back into the real economy: fixed asset investment intensity increases by 0.8 percentage points, R&D investment intensity by 0.5 percentage points, and capital expenditure intensity by 0.7 percentage points following NSC establishment. Spatial analysis further reveals that the inhibitory effect on financialization spills beyond host cities to neighboring regions through technology diffusion, network connectivity, and competitive demonstration.

The paper concludes that computing power infrastructure does not merely enable firms to do new things; it can also help correct existing misallocations. When firms gain access to supercomputing resources, data-driven real investment can become more attractive relative to financial assets, and capital can flow back into fixed assets, R&D, and productive capacity. The spatial spillover findings are policy-relevant because the benefits are not confined to host cities but extend outward, which has important implications for how infrastructure investment is viewed as a policy tool.

The findings carry significant implications for policymakers, corporate managers, investors, and industry practitioners. For governments, investing in intercity computing networks offers a scalable complement to traditional regulatory instruments such as capital controls. The heterogeneity results suggest that uniform digital transformation subsidies may be inefficient; a tiered approach differentiated by industry computing intensity would better match policy resources to firm-level absorption capacity. For managers, the message is clear: firms lacking data capitalization capability may be systematically overallocating to financial markets by underestimating the potential returns from data-driven real investment. For investors, proximity to computing power infrastructure could serve as a signal of future changes in corporate asset allocation, balance sheet composition, and earnings quality. Firms transitioning from financial income dependence to core business strengthening may experience short-term earnings

volatility but improved long-term sustainability. For industry associations, the spatial spillover evidence suggests a role in organizing cross-regional computing power sharing platforms and coordinating joint procurement of cloud computing services, especially for smaller firms with limited market visibility.

The study also notes limitations. The treatment variable is a binary indicator based on NSC establishment, which identifies causal effects but cannot capture continuous variation in computing power supply. Future research could construct continuous measures of city-level computing power accessibility as statistical systems improve.

References

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Lucy Wang

BioDesign Research

[email us here](#)

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