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Research Article

**ARTIFICIAL INTELLIGENCE INVESTMENT AND
FIRMS' MARKET-BASED BRAND INFLUENCE**Liangliang XUE ¹¹ Al-Farabi Kazakh National University, 050040, Kazakhstan

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ABSTRACT

This study examines the relationship between AI investment and firms' market-based brand influence and the mechanisms underlying this relationship. Empirical models were constructed using panel data on Chinese A-share-listed firms from 2014 to 2023. Market-based brand influence is measured by market share, while AI investment is measured by the logarithm of firms' AI spending. It was found that AI investment is positively associated with firms' market-based brand influence. For every 10% increase in firm AI investment, market-based brand influence will increase by 0.338%. Corporate financial growth momentum is a mediating channel through which AI investment enhances brand influence. Financing constraints negatively moderate the relationship between AI investment and market-based brand influence. The positive association between AI investment and market-based brand influence is stronger among non-manufacturing firms. These findings empirically link AI-driven innovation to market-based brand outcomes and extend the literature on AI's strategic value.

Keywords: Artificial intelligence, Investment, Brand influence, Growth momentum, Financing constraints.

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INTRODUCTION

An increasing number of enterprises are using artificial intelligence (AI) to assess their development status (Orazgaliyeva et al., 2023). The promotion and application of AI technology have reshaped how enterprises operate and compete and have significantly influenced their brands. Firms that invest in AI have achieved gains in innovation and productivity (Babina et al., 2024). Enterprises' brand-building strategies struggle to keep pace with technological progress, which tends towards the use of lower-cost production factors (Kaliyeva et al., 2025), leading to an adaptation crisis in brand building (Davenport et al., 2020). The traditional brand communication model is challenged by AI technology, and the continuous expansion of AI applications is profoundly affecting the brand value of enterprises. This raises a key question: How does AI investment affect corporate brands, and through what mechanisms does AI investment exert this impact?

Existing research on firm AI adoption mainly focuses on operational and financial outcomes, with limited analysis of its effects on firms' intangible assets. Previous studies have examined the impact of AI applications on enterprise productivity (Czarnitzki et al., 2023), the impact of AI applications on enterprise market value (Xue et al., 2025), the role of AI applications in promoting enterprise structural transformation and business model innovation (Roberts & Candi, 2024), and the impact of AI applications on human resources, supply chain management, finance, and operational decision-making (Helo & Hao, 2022; Hou, 2022; Samuel et al., 2022; Schweitzer & De Cremer, 2024). However, limited research has examined the relationship between firm-level AI investment and intangible market-based outcomes. For example, AI technology can improve firms' ability to align their brands with market needs (Campbell et al., 2020) and reshape corporate brand strategy. The existing literature lacks a framework explaining the mechanisms through which AI investment affects intangible assets.

This research analyzes the transmission mechanism of the impact of AI investment on corporate branding from a financial perspective. The empirical models incorporate AI investment, financial growth momentum, and market-based brand influence as the core variables. The models analyze the impact of AI investment on financial growth momentum and the effect of financial growth momentum on market-based brand influence. Improving enterprises' internal efficiency makes more resources available for brand building (Mizik, 2010; Srinivasan & Hanssens, 2009). Brand influence is an intangible asset recognized by the capital market (Ailawadi et al., 2003). Accordingly, AI investment may improve operational efficiency, support sustained financial growth, and ultimately strengthen firms' market-based brand influence.

This research empirically examines the relationship between AI investment and market-based brand influence from a financial performance perspective. AI investment enhances firm efficiency and improves financial performance. Improved financial performance can support market expansion. In this study, market share is used as an observable market-based proxy for brand influence. Understanding the factors that influence the impact of AI investment on brand influence is a strategic issue for promoting corporate AI investment. By testing these relationships, this study examines the effect of AI investment on market-

based brand influence, the mediating role of financial growth momentum, and the moderating role of financing constraints.

Existing AI research has primarily focused on how AI affects productivity, innovation, and performance. Branding research has mainly examined interactions between consumers and AI applications. This study conceptualizes AI investment as an upstream organizational resource whose market value may be converted into realized value through firm-level growth processes. This framework extends prior research in three ways. First, it shifts the focus of research on firm-level AI investment from operational performance to market-based brand influence. Second, it treats revenue growth as a conversion mechanism rather than assuming a direct relationship between AI investment and brand influence. Third, it explicitly defines financing constraints as a boundary condition that limits the realization of AI-enabled brand benefits.

LITERATURE REVIEW

AI Investment and Market-Based Brand Influence

AI algorithms can help businesses strengthen connections between consumers and brands, identify consumer preferences, and influence consumer purchasing decisions (Deryl et al., 2023). AI applications are gradually reshaping the interactions between firms' products and services and end consumers, and firms that prioritize the application of AI will gain competitive advantages in the market (Huang & Rust, 2021). AI-enabled big data analytics enables enterprises to improve marketing effectiveness and resource allocation efficiency (Erevelles et al., 2016; Mikalef et al., 2019). De Luca et al. (2021) found that AI technology utilizes big data analysis to enhance marketing affordances and service innovation capabilities. AI investment enhances firms' technological capabilities, thereby increasing brand influence.

Brand influence can be reflected in brand assets recognized by the capital market. One economic measure of brand equity is the revenue premium that a branded product generates relative to a comparable private-label product (Ailawadi et al., 2003). AI applications help businesses reshape their brand strategy (Hue & Hung, 2025). They also enhance organizational capital, thereby improving corporate reputation (Chen et al., 2026). AI has become an important factor affecting brand competition in consumer markets (Puntoni et al., 2021). Firms use AI algorithms and big data analytics to gain competitive advantages in dynamic environments (Sullivan & Fosso Wamba, 2024), enhance data-driven decision-making capabilities, and drive brand communication (Mustak et al., 2021). AI investment can improve brand reputation, and AI investment in the banking industry can enhance brand image (El Fawal et al., 2024). AI investment can enhance customer loyalty to the brand and strengthen customer trust in the brand (Guerra-Tamez et al., 2024; Laksamana et al., 2024). The advantages of AI have prompted investors to value the ability of firms to keep up with the times, indicating that the market has recognized the intangible asset returns brought by AI investment (Soto, 2025). Therefore, AI investment can enhance firms' market-based brand influence.

Financial Growth Momentum as a Mediating Mechanism

Financial growth momentum refers to the sustained growth trend of a firm's core financial indicators over time. The outcomes of marketing – and brand-related

investments need to be reflected in financial performance before they can be recognized by the capital market. Marketing activities can increase firm value in the capital market by promoting sales growth (Srinivasan & Hanssens, 2009). AI investment can support the emergence of new business models by enabling firms to use AI to analyze large volumes of data, thereby helping them gain competitive advantages and improve financial performance (Liu et al., 2024). The returns to AI investment may depend on its adoption intensity, and AI can generate more substantial revenue gains once its adoption reaches a sufficiently high level (Lee et al., 2022). Enterprises that invest more in the field of AI are more likely to achieve higher investment returns (Mishra et al., 2022). Firms can efficiently analyze data to improve financial performance through the application of AI (Wamba et al., 2017). Financial growth momentum captures changes in a firm's revenue growth over time and reflects the dynamic development of its financial performance. Improvements in operational efficiency resulting from enterprise AI applications have translated into financial growth through the operating cycle, enhancing firms' financial momentum (Mardanov et al., 2026). AI investment can strengthen firms' financial growth momentum.

The resource-based view suggests that sustained revenue growth provides firms with the resources needed to support market expansion and strengthen brand influence. Dong (2025) found that AI applications can improve brand reputation and intelligent services, thereby supporting firm growth. The size of brand value depends on whether the brand can bring sustainable revenue growth to the enterprise (Bahadir et al., 2008). AI investment first promotes revenue growth by improving operational efficiency and supporting product and service innovation, thereby building financial growth momentum over time. Sustained financial growth provides firms with the resources needed for brand communication. It also signals stable growth to the capital market and customers, which may ultimately strengthen firms' market-based brand influence. Revenue growth itself can constitute a positive brand signal by providing investors with evidence of firm performance and supporting market value and brand strength (Mizik, 2010). Firms with stronger financial growth are more likely to achieve greater market-based brand influence.

Financing Constraints as a Moderating Mechanism

Financing constraints reflect the difficulties that firms face in obtaining external financing. Whited and Wu (2006) constructed the WW Index, which considers factors such as cash flow, leverage ratio, scale, dividend payments, and industry sales growth to measure the external financing frictions that firms face. Hadlock and Pierce (2010) further proposed the SA index, which incorporates firm size and age into the measurement framework to measure financing constraints. When financing constraints are severe, firms are more likely to adopt conservative business strategies and limit external investment. At this point, the brand building of the enterprise will be in a stable or contracted state. This is consistent with the logic of capital structure theory, where insufficient funds can limit firm investment and brand building. Both AI investment and brand building require substantial upfront investment and often have relatively long payback periods. When firms face severe financing constraints, they are more likely to compress marketing – and innovation-related budgets (Srinivasan & Hanssens, 2009). Financing constraints can restrict firms' brand-building activities and impede firm growth (Şengül et al., 2025), thereby limiting the expansion of their market-

based brand influence. When financing is limited, firms will restrict investments, which will have a negative impact on their brand image (Chen et al., 2024). In a resource-constrained environment, enterprises will become more cautious in their long-term investment in brand assets. The systematic and idiosyncratic risks of firms with stronger brand assets are relatively low, indicating that brand assets can help reduce stock price volatility and the cost of capital, but the prerequisite is that the firms can continue to invest in maintaining brand image (Rego et al., 2009; Yildiz & Metin Camgoz, 2019). Accordingly, even when firms have already made substantial AI investments, severe financing constraints may limit the complementary investments required for AI implementation, organizational adaptation, marketing, and brand communication. As a result, firms may be less able to translate AI investment into observable market-based brand influence in a timely and effective manner. Financing constraints weaken the impact of AI investment on brand influence, resulting in a decrease in the marginal brand effect of AI investment.

However, the firm-level process through which AI investment is converted into a relative market position remains insufficiently specified. We therefore develop a framework in which AI investment affects market-based brand influence directly and indirectly through revenue growth, while financing constraints condition the strength of this conversion. This article proposes the following hypotheses:

H1: AI investment is positively associated with firms' market-based brand influence.

H2: Financial growth momentum mediates the positive relationship between AI investment and firms' market-based brand influence.

H3: Financing constraints weaken the positive relationship between AI investment and firms' market-based brand influence.

METHODOLOGY

This research uses data from Chinese listed firms from 2014 to 2023 for empirical analysis. The data are sourced from China Stock Market Accounting Research (CSMAR). During the initial data management process, financial service data, outliers, and missing samples were removed (Li et al., 2024). This data processing yielded 20,346 observations from 3,952 listed firms.

Variable Settings

The dependent variable in this article is market-based brand influence (BDIF). Brand influence stems from consumer perception of and loyalty to a brand (Keller, 1993). High brand equity typically translates into stronger market performance, i.e., increased market share. This research uses industry-year market share as a market-based proxy for market-based brand influence (Edeling & Himme, 2018; Jung et al., 2016). The market share of enterprises is mostly concentrated between 1% and 30%. To alleviate data skewness and heteroscedasticity, we apply a natural-log transformation to the market share of enterprises.

However, market share is not equivalent to customer-based brand equity. It can also be affected by pricing, distribution coverage, production capacity, acquisitions, and industry structure. Accordingly, we interpret BDIF as a

market-based manifestation of brand influence and acknowledge the limitations of this proxy.

Following Tingbani et al. (2025), this article uses AI investment as the explanatory variable. This research uses the logarithm of AI investment amount (AIIIL) to measure the level of firm AI investment. AIIIL includes investment in AI hardware and AI-enabled software.

As for the control variables, this article selects the debt-to-asset ratio (Lev), net profit margin of total assets (ROA), accounts receivable ratio (REC), institutional investor shareholding ratio (INST), board size (Board), equity concentration index (Top10), equity balance (Balance), listing years (LAge), and firm age (FAge).

Model Design

Benchmark Regression Analysis Model

$$BDIF_{i,t} = \alpha_0 + \alpha_1 AIIIL_{i,t} + \alpha' X + \lambda_i + year_t + \mathcal{E}_{i,t} \quad (1)$$

Where i and t index the i -th enterprise and the t -th year, respectively, α_0 is the intercept, $BDIF$ is the brand influence, $AIIIL$ represents AI investment, X is the control variable, λ_i is the individual fixed effect, $year_t$ is the time fixed effect, and $\mathcal{E}_{i,t}$ is the random disturbance term.

Mediating Regression Analysis Model

This research uses financial growth momentum (FGM) as the mediating variable proposed in H2 and the revenue growth rate as its indicator.

$$FGM_{i,t} = \beta_0 + \beta_1 AIIIL_{i,t} + \beta' V_{i,t} + \lambda_i + year_t + \eta_{i,t} \quad (2)$$

$$BDIF_{i,t} = \gamma_0 + \gamma_1 AIIIL_{i,t} + \gamma_2 FGM_{i,t} + \gamma' V_{i,t} + \lambda_i + year_t + \theta_{i,t} \quad (3)$$

In the formula, FGM denotes financial growth momentum, the mediating variable measured by the sales revenue growth rate.

Moderating Regression Analysis Model

This study uses the FC index to measure the degree of financing constraints of enterprises based on the financing constraint adjustment effect proposed by H3. The FC index data are sourced from the CSMAR database. This index originated from the Investment Cash Flow Sensitivity proposed by Fazzari et al. (1988), but this research mainly used the FC value obtained by the multi-index logit model proposed by Kuang et al. (2010). We use this measure in the main analysis because it incorporates several observable dimensions of financing friction in the Chinese institutional context. In this context, the FC index has greater transparency and better reproducibility.

$$BDIF_{i,t} = \varphi_0 + \varphi_1 AIIIL_{i,t} + \varphi_2 FC * AIIIL_{i,t} + \varphi_3 FC_{i,t} + \varphi' V_{i,t} + \lambda_i + year_t + \mu_{i,t} \quad (4)$$

Including the interaction term $FC * AIIIL$ in equation (4) can test whether financing constraints will moderate the impact of AI investment on brand influence.

RESULTS

Table 1 shows the results of the baseline regression. Column (1) shows the regression results without control variables and fixed effects. The results show

that the AILL regression coefficient is significantly positive, proving that AI investment can promote market-based brand influence. Column (2) shows the regression results with all control variables added. The AILL regression coefficient is significantly positive. This further supports the conclusion that AI investment can enhance a firm's brand influence. Column (3) shows the regression results with all control variables and fixed effects added. The AILL regression coefficient is significant and positive. This shows that AI investment can significantly promote market-based brand influence. In economic terms, a 10% increase in AI investment is associated with an approximately 0.338% increase in market-based brand influence. This empirical result provides strong support for Hypothesis 1, indicating that AI investment can promote the enhancement of market-based brand influence.

Table 1
Benchmark Regression Results

Variables	(1)	(2)	(3)
	BDIF	BDIF	BDIF
AILL	0.0406*** (19.80)	0.0312*** (15.56)	0.0338*** (16.81)
Control variable	0	100%	100%
_cons	-0.0441 (-1.34)	-0.540*** (-6.63)	-1.193*** (-7.04)
Firm	Yes	Yes	Yes
Year	Yes	No	Yes
N	20346	20346	20346
F	392***	154***	141***
r2	0.924	0.928	0.929
r2_a	0.909	0.913	0.914

Source: t statistics in parentheses. * $p < .10$. ** $p < .05$. *** $p < .01$.

Model Robustness Test

To assess the reliability of the research conclusions, this paper conducts four robustness tests: using robust standard errors, reducing the sample size, adjusting the sample range, and adjusting the industry fixed effects.

(1) Robust standard errors. As shown in the first column of Table 2, after switching from ordinary standard errors to robust standard errors, the core variables are still significant. The core conclusion of this research model remains statistically significant with heteroskedasticity-robust standard errors, so the conclusion is robust.

(2) Excluding observations from 2022. This test assesses whether the main result remains robust after reducing the sample size. As shown in the second column of Table 2, the AILL coefficient remains statistically significant after excluding observations from 2022, which shows that the results are still robust.

(3) Adjust sample range. 2019 is an important turning point for AI economic development, and the epidemic has had a profound impact

on economic development. Therefore, this paper sets the sample range to 2019–2023. As shown in the third column of Table 2, the regression results are still robust.

(4) Adjust industry fixed effects. To address possible model specification bias, this research adjusts the fixed effects by adding firm-industry fixed effects. As shown in the fourth column of Table 2, the AIIL coefficient is still significantly positive, indicating that the results remain robust.

Table 2

Robustness Test Results

Variables	(1)	(2)	(3)	(4)
	BDIF	BDIF	BDIF	BDIF
AIIL	0.0338*** (11.21)	0.0313*** (14.05)	0.0281*** (8.52)	0.0304*** (19.53)
Control variable	Yes	Yes	Yes	Yes
_cons	-1.193*** (-5.81)	-1.208*** (-6.07)	-0.549 (-1.37)	-0.884*** (-6.75)
Firm	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
Industry	No	No	No	Yes
N	20346	16855	8809	20344
F	58***	110***	30***	191***
r ²	0.929	0.931	0.979	0.958
r ² _a	0.914	0.916	0.967	0.949

Source: Compiled by the authors

Endogeneity Test

Because the impact of AI investment on corporate brands may take more than a year to materialize, this research uses one – and two-year lags of AIIL. As shown in Table 3, the estimated coefficient remains significantly positive, demonstrating robust results.

Table 3

Lag Test Results

Variables	(1)	(2)
	One-year lag BDIF	Two-year lag BDIF
L.AIIL	0.0237*** (10.60)	
L2.AIIL		0.00823*** (3.51)
Control variable	Yes	Yes
_cons	-0.966*** (-4.83)	-0.418* (-1.73)

Firm	Yes	Yes
Year	Yes	Yes
N	15739	12657
F	96***	63***
r2	0.941	0.949
r2_a	0.928	0.936

Source: Compiled by the authors

This research uses SYS-GMM regression to assess robustness to a dynamic panel specification and potential endogeneity, as well as the validity of the instrumental variables. The instrumental variable selected is the proportion of regional AI funding to the total regional funding. The Arellano-Bond autocorrelation test results show that AR(1) is significant in the first-order difference ($p < 0.01$), while AR(2) is not significant ($p = 0.571$), which is consistent with the theoretical expectations of the dynamic panel model and indicates that the model setting is reasonable. The Hansen test results show that the null hypothesis of overall effectiveness of the instrumental variables is not rejected ($p = 0.269$), indicating that the selected instrumental variables are appropriate. A further difference Hansen test also shows that the additional instrumental variables can be considered exogenous ($p = 0.514$), thereby enhancing the reliability of the estimation results. As shown in Table 4, the SYS-GMM estimate of AIII remains positive and statistically significant. This provides additional evidence that the positive association between AI investment and market-based brand influence is robust to a dynamic panel specification.

Table 4
SYS-GMM Estimation Results

Variables	SYS-GMM
	BDIF
L.BDIF	0.798*** (0.097)
AIII	0.028** (0.012)
Control variable	Yes
_cons	-1.040 (1.550)
N	16224

Source: Compiled by the authors

Mediation Mechanism Analysis

Theoretical analysis has found that AI investment can significantly improve operational efficiency and sales revenue (Mishra et al., 2022). This research draws on the positive correlation between brand value and firm sales growth proposed by Bhaskaran et al. (2023). This article uses FGM as a mediating variable, measured by the growth rate of a firm's operating revenue. The proposed transmission mechanism suggests that AI investment promotes revenue

growth, which in turn contributes to the expansion of the firm’s market share. The regression results in Table 5 indicate that AI investment has a significant positive impact on corporate financial growth momentum, and corporate financial growth momentum has a significant positive impact on market-based brand influence. Therefore, the results are consistent with Hypothesis 2.

Table 5
Analysis of Intermediary Mechanism

Variables	(1)	(2)
	FGM	BDIF
AiIL	0.0161*** (5.09)	0.0326*** (16.31)
FGM		0.0750*** (15.39)
Control variable	Yes	Yes
_cons	-0.693*** (-2.61)	-1.141*** (-6.78)
Firm	Yes	Yes
Year	Yes	Yes
N	20346	20346
F	238***	151***
r2	0.329	0.930
r2_a	0.192	0.915

Source: Compiled by the authors

Moderation Effect Analysis

Financing constraints can moderate the strength of the relationship between AI investment and a firm’s brand influence by affecting the financial resources available to the firm. This research uses financing constraints as a moderating variable. This choice is based on the following logic: firms with lower financing constraints have greater access to funds and can more smoothly make and execute AI investment decisions. Therefore, firms with lower financing constraints have stronger AI investment capabilities. The regression results in Table 6 show that the interaction term between AI investment and financing constraints is negative and statistically significant at the 1% level, which is consistent with our theoretical expectations. Specifically, lower financing constraints strengthen the marginal effect of AI investment on market-based brand influence. This empirical result provides strong support for Hypothesis 3, indicating that financing constraints have a moderating effect on the impact of AI investment on market-based brand influence.

Table 6
Moderating Effect Regression Results

Variables	(1)
	BDIF
AiIL	0.0292*** (14.50)
FC*AiIL	-0.0578*** (-10.78)
FC	-0.300*** (-18.59)
Control variable	Yes
_cons	-0.824*** (-4.88)
Firm	Yes
Year	Yes
N	20346
F	156***
r2	0.930
r2_a	0.916

Source: Compiled by the authors

Industry Heterogeneity Analysis

The heterogeneity analysis examines whether the relationship differs between manufacturing and non-manufacturing firms. Firms are divided into manufacturing and non-manufacturing groups for the heterogeneity analysis. The results are shown in Table 7.

Table 7
Heterogeneity Analysis Results

Variables	(1)	(2)
	Manufacturing BDIF	Non-manufacturing BDIF
AiIL	0.0243*** (16.42)	0.0514*** (9.93)
Control variable	Yes	Yes
_cons	-1.348*** (-10.71)	-0.577 (-1.38)
Firm	Yes	Yes
Year	Yes	Yes
N	14670	5613
F	163***	33***
r2	0.961	0.926
r2_a	0.953	0.908

Source: Compiled by the authors

Based on the results in Table 7, the estimates show that for manufacturing enterprises, the coefficient of AIL's impact on BDIF is 0.0243, which is significant at the 1% level. For non-manufacturing enterprises, the coefficient of AIL's impact on BDIF is 0.0514, which is significant at the 1% level. Since both coefficients were significant, we further compared the two regression coefficients using Fisher's intergroup coefficient difference test. The results are shown in Table 8.

Table 8
Test of Coefficient Differences between Groups

Variables	b0-b1	Freq	p value
AIL	0.027	0	0.00
Lev	0.273	1	0.01
ROA	0.068	37	0.37
REC	0.131	17	0.17
Board	-0.018	64	0.36
INST	0.198	1	0.01
Top10	-0.2	89	0.11
Balance3	0.017	27	0.27
ListAge	0.051	8	0.08
FirmAge	-0.349	97	0.03
cons	0.771	8	0.08

Source: Compiled by the authors

The inter-group coefficient difference test results in Table 8 show that, across the 100 permutation replications, the AIL impact coefficient of non-manufacturing enterprises was consistently higher than that of manufacturing enterprises, with a significant difference at the 1% level. This indicates that AI investment has a stronger impact on the brand influence of non-manufacturing enterprises. Two possible explanations are as follows. First, the transformation cycle of AI investment is shorter in non-manufacturing enterprises. Second, AI investment may be more likely to improve innovation in non-manufacturing industries. Therefore, non-manufacturing enterprises may respond to market changes more quickly, allowing their market-based brand influence to increase more strongly.

DISCUSSION

The results of this research confirm the impact of AI investment on market-based brand influence. Research based on U.S. firms shows that firms investing in AI generally experience faster sales growth and higher market valuations (Babina et al., 2024). Evidence from German firms further indicates that the intensity of AI adoption is significantly and positively associated with firm productivity (Czarnitzki et al., 2023). These studies mainly focus on firm growth and productivity. This study further extends the outcomes of AI investment to firms' relative positions in product markets. The returns generated by AI investment may also be translated into market-based brand influence.

This research provides empirical evidence for the conceptual proposition that AI investment can drive market-based brand influence (Deryl et al., 2023; Hue & Hung, 2025). Improved financial performance functions as a mediating mechanism through which AI investment may contribute to the expansion of brand influence, and the resource-based view provides a theoretical basis for this framework. High financial performance is accompanied by high brand value and influence (Bhaskaran et al., 2023), and brand influence depends on the sustainable revenue growth of the enterprise (Bahadir et al., 2008). This research points out that enterprise AI investment promotes the growth of financial momentum, which in turn drives the enhancement of brand influence. The difficulty of corporate financing will moderate the strength of the relationship between AI investment and brand influence. The level of financial abundance and the difficulty of corporate financing are crucial for strategic investment (Şengül et al., 2025; Shao et al., 2022). This research integrates investment strategy management, corporate financial management, and marketing perspectives to analyze the relationship between AI investment, financial growth momentum, and brand influence. Based on this framework, large-sample data are used to examine whether AI investment contributes to market-based brand outcomes.

The results of this research can provide strategic guidance for enterprise policy-making. Investing in AI not only supports technological innovation but also serves as a strategy for enhancing firms' brand influence. Enterprise managers can leverage the brand benefits of AI applications through AI investment, making it easier for new technologies to gain the attention of target customers. Enterprises with sustainable financial growth are more capable of converting AI investments into brand value. Enterprises with high financial performance will drive market share growth and form a virtuous cycle. Enterprises should use financial resources to support AI capabilities that can generate brand effects perceived by the market. Compared with manufacturing industries, service-oriented industries generally have more direct interactions with end customers. The service industry is more likely to utilize AI for customer analysis and brand positioning. AI investment in manufacturing enterprises may be affected by longer industry cycles, which can slow the transmission of AI-related benefits to brand outcomes and reduce the impact of AI investment on their brand influence. The manufacturing industry should pay attention to the impact of AI on target customers and markets to enhance brand reputation.

The empirical analysis uses fixed effects and SYS-GMM to address potential endogeneity arising from unobserved factors. Subsequent research can use longitudinal case studies to analyze the impact of AI on brands in controlled environments, in order to supplement the research findings. The progress and application of AI technology are dynamic and require continuous research on the brand advantages brought by AI applications.

CONCLUSION

This article analyzes the impact of artificial intelligence investment on corporate brands from the perspective of corporate finance. Research has confirmed that investing in AI can significantly enhance a firm's brand influence. The research model remains stable after robustness and endogeneity tests, and the empirical conclusion that AI investment enhances market-based brand influence is valid. Financial growth momentum is an important transmission mechanism linking

AI investment to brand influence. AI investment has driven the growth of enterprise revenue, which is mainly reflected in financial indicators, namely financial growth momentum. The manifestation of financial growth momentum in enterprise operations is mainly the expansion of market share, which in turn promotes the enhancement of the firm's brand influence. Financing constraints reduce the positive effect of AI investment on firms' market-based brand influence, that is, financing constraints have a negative moderating effect. The heterogeneity analysis found that the promotion effect of AI investment on market-based brand influence is more significant in non-manufacturing enterprises. In non-manufacturing industries, AI investment is more directly oriented toward consumer markets and may have a shorter implementation cycle, allowing firms to convert AI investment into revenue more rapidly, driving enterprise market expansion.

This article analyzes the intangible brand benefits generated by AI investment from a financial perspective. By addressing the gap between AI adoption and brand asset enhancement, this article contributes to the literature on technology-driven business value for enterprises. The findings indicate that the strategic value of AI is not limited to improving productivity but may also extend to market-based brand outcomes supported by firms' financial performance. The brand benefits generated by AI investment have been demonstrated through model analysis with financial performance as the mediating factor and financing constraints as the moderating factor.

Based on the analysis of the research results, this article proposes the following policy recommendations: (1) Incorporate the potential benefits generated by AI investment into financial evaluation, develop indicators for evaluating the contribution of AI investment to brand outcomes, and systematically evaluate the role of AI in enhancing brand outcomes. (2) Firms should prioritize AI investments in customer-facing activities where AI-enabled improvements in service, personalization, and market responsiveness are more likely to be perceived by customers. (3) Enterprises should elevate AI investment to the level of strategic management to address the challenges associated with the rapid development and widespread application of AI technology. AI, as an advanced productive capability for enterprises, should also be regarded as a strategic asset.

Using large-sample data and empirical models, this study confirms that AI investment can enhance market-based brand influence. However, this study still has several limitations. First, market share reflects the market manifestation of brand influence rather than directly capturing customer awareness or loyalty. Market share may also reflect factors such as pricing, distribution, and the competitive landscape. Second, the sample consists of Chinese listed firms, and their institutional environment may limit the generalizability of the findings to small and medium-sized enterprises and firms in other institutional contexts. Future research may combine financial data with customer-based measures and cross-country samples.

Ethical Commission Approval

This study did not require approval from an ethics committee as it did not involve human participants, animals, or sensitive personal data. The study used secondary firm-level data obtained from the CSMAR database.

Conflict of Interest Statement

There is no conflict of interest with any institution or person within the scope of this study.

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