

The Value Transmission Mechanism of Innovation Input: A Study on the Mediating Effect of Economic Profit

Wei Jiang

School of Economics and Management, Southwest Petroleum University, Chengdu 610000, China
Email: 597330535@qq.com

How to cite this paper: Jiang, W. (2026). The Value Transmission Mechanism of Innovation Input: A Study on the Mediating Effect of Economic Profit. *Economics & Business Management*, 4(2), 112-122. ISSN Print: 3079-5214; ISSN Online: 3079-5222. <https://doi.org/10.63313/EBM.2028>
Published: 2026-01-19

Copyright © 2026 by author(s) and Erytis Publishing Limited.

This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Abstract

Based on the data of A-share listed companies from 2008 to 2024, this paper empirically tests the mechanism of action among corporate innovation, economic profit, and corporate value. The study finds that substantive innovation significantly reduces the current economic value added per share (EVApS) and exerts a negative indirect impact on corporate value; however, after introducing this mediating variable, the direct effect of innovation on value is not significant, forming a typical “suppression effect”. The results indicate that although innovation suppresses financial performance in the short term, the market may still hold expectations for its long-term value. This research provides empirical evidence for understanding the complex path through which innovation affects corporate value.

Keywords

Corporate Innovation; Economic Profit; Mediating Effect

1. Introduction

1.1. Research Background

Under the macro strategy of innovation-driven development, to accurately evaluate the market value of enterprises, it is necessary to consider how their innovative activities are reasonably priced by the capital market. However, a key theoretical “black box” has not been fully opened: through what paths do enterprises’ innovation inputs (such as patent applications) affect their market valuations while consuming current resources?

Although Economic Value Added (EVA), as a key indicator measuring the current value creation of enterprises, has a fundamental connection with the market expectations represented by Tobin’s Q value, most existing studies focus on testing the direct effects of external factors such as environment and governance on Tobin’s Q value, or adopt traditional accounting performance indicators, generally ignoring

the in-depth analysis of the complete transmission chain of “innovation → economic profit → market valuation”. Innovative activities have the dual attributes of “cost” and “benefit”, which makes there may be complex transmission paths and offset mechanisms in the process of affecting corporate value.

Therefore, the key theoretical leap of this study is to shift from simply testing the direct correlation between variables to de”between innovation and Tobin's Q value. By constructing a transmission model of “patent application—EVApS—Tobin's Q”, this study aims to solve the theoretical puzzle of how enterprises' future potential is priced in the capital market at present, and provide new empirical evidence for understanding the inherent unified logic from value creation to realization.

1.2. Research Significance

(1) Theoretical Significance

This study provides a new theoretical framework and empirical evidence for understanding the internal transmission mechanism of corporate innovation affecting market value. Different from the traditional perspective that regards innovation as a mere moderating variable, this paper reveals the transmission path through which innovation affects corporate value by influencing current economic profit (EVA), and identifies the “suppression effect” formed by the offset of positive and negative effects. This finding shifts the focus of relevant research from whether the relationship exists” or “whether the relationship is moderated” to “how the impact is transmitted through intermediate mechanisms”, deepens the understanding of the complexity of the innovation value realization process, and provides a useful exploration for integrating valuation theory, innovation theory, and mediating effect analysis methods.

(2) Practical Significance

For investors, this study reveals the “dual evaluation” logic of the market for corporate innovation. It reminds investors that when facing high-innovation enterprises, they should recognize that the decline in their current economic profits may be precisely the “investment cost” for future value, thus needing to construct a comprehensive valuation framework that can balance both short-term profit performance and long-term growth options.

For enterprise managers, the research conclusions mean that they need to more strategically manage the value narrative communicated with the market. While continuing to invest in innovation, they should actively clarify the long-term strategic significance of current R&D expenditures to the market through information disclosure and other methods, so as to help the market correctly interpret the growth signals behind profit fluctuations and avoid undervaluation.

1.3. Research Content

To achieve the above research objectives, this paper carries out the following research context:

Firstly, theoretical analysis and literature review. Systematically sort out the classic theories and literatures related to the value relevance of economic profit (EVA) and the economic consequences of corporate innovation capabilities, and focus on reviewing the application of mediating effect and suppression effect in financial research, so as to lay a theoretical foundation for proposing the research concept of the transmission path of “innovation - profit - value”.

Secondly, research design and data preparation. Construct an empirical model with Tobin's Q value as the explained variable and corporate innovation capability (patents) as the core explanatory variable. This study adopts the mediating effect analysis framework, sets economic profit (EVA) as the key mediating variable, to test the existence and significance of the transmission path of “innovation input → economic profit → corporate value”. At the same time, clarify the measurement methods and data sources of each variable, and clean and conduct descriptive statistics on the sample data.

Thirdly, empirical analysis and result discussion. Firstly, follow the mediating effect test procedure to sequentially test the total effect of innovation on corporate value, the impact of innovation on economic profit, and the mediating role of economic profit in the relationship between innovation and value. The empirical results show that although the direct total effect of innovation on corporate value is not significant, it has a significant negative indirect impact by reducing current economic profit, forming a typical “suppression effect”. This finding reveals that when evaluating innovative enterprises, the market balances their short-term financial pressure and long-term growth potential, reflecting the complex mechanism of innovation value realization.

Fourthly, conclusion extraction and implications. Summarize the core finding of this study on the transmission mechanism that innovation indirectly affects corporate value by inhibiting current economic profit, and accordingly provide targeted practical implications for investors to understand the valuation logic of innovative enterprises and for enterprise managers to optimize value communication strategies.

2. Literature Review

2.1. Literature Review on Corporate Value and the Impact of Innovation

The measurement of corporate value is a core issue in the field of corporate finance. Tobin's Q value, as a proxy variable for market value, is widely used in such studies (Zhi Yanli & Teng Yanghui, 2025; Fan Zigui, 2025).

In recent years, the impact of innovative activities on corporate value has attracted wide attention. Hou Jiaxing (2023), taking China's pharmaceutical manufacturing industry as an example, found that R&D investment has a significant positive impact on both corporate performance and market value (Tobin's Q). Wang Yan (2022) further studied from the perspective of patent quality and found that patent quality

is significantly positively correlated with corporate value, and the legal environment plays a positive moderating role in this relationship. The research by Li Kaodui et al. (2025) revealed how external environmental pressure drives innovation. They found that climate risks will "force" enterprises to carry out green innovation, thereby enhancing corporate value, among which green innovation plays a key mediating role.

However, the mechanism of action of innovation on corporate value may be more complex. The research by Li Wenjing and Zheng Manni (2016) distinguished the motivation of innovation. They found that although enterprises encouraged by industrial policies have an increase in the total number of patent applications, it is mainly reflected in the increase of non-invention patents (strategic innovation), and only invention patents (substantive innovation) can significantly enhance corporate market value. This indicates that the market can distinguish between innovative activities of different "qualities" and give different pricing.

In addition, the research by Jiang Qiankun and Li Jingjing (2025) based on A-share listed companies found that ESG rating is positively correlated with corporate value, and green technology innovation plays a positive moderating role in it. Xie Bing (2025) pointed out from the perspective of financing constraints that financial flexibility can enhance corporate value, especially in the environment of financing constraints. Fan Zigui (2025) further cut in from the perspective of digital transformation and found that ESG information disclosure has a positive impact on corporate value, and digital transformation plays a positive moderating role in this relationship.

2.2. Literature Review on EVA as a Performance Evaluation Indicator

To overcome the defects of traditional accounting indicators, Economic Value Added (EVA) has attracted attention because it can more truly reflect corporate value creation. However, in existing studies, EVA is more used as the result of performance evaluation rather than the driving factor of value. For example, when studying the impact of capital structure on corporate performance, Wang Shiqi (2024) took EVA as the explained variable. When discussing the relationship between financial flexibility and corporate value, Xie Bing (2025) also took EVA as one of the measurement indicators of corporate value. This research perspective that regards EVA as an endpoint fails to fully reveal its role as an intermediate link in the value creation chain.

2.3. Literature Commentary

Through sorting out the existing literature, it can be found that existing studies have clearly revealed the positive impact of innovative activities on corporate value (Hou Jiaying, 2023; Wang Yan, 2022), and have begun to pay attention to its internal mechanisms, such as mediating effect (Li Kaodui et al., 2025) and the importance of

innovation quality (Li Wenjing & Zheng Manni, 2016). In addition, the impact of factors such as ESG performance (Jiang Qiankun & Li Jingjing, 2025), digital transformation (Fan Zigui, 2025), and financial flexibility (Xie Bing, 2025) on corporate value has also gradually attracted attention. These achievements have laid a solid foundation for this study.

However, there are still room for improvement in existing studies: firstly, most studies directly link innovation (such as R&D investment, patents) with market value, and the financial performance transmission path between them has not been fully explored. Secondly, when studying EVA, scholars mostly regard it as the endpoint of comprehensive performance (Wang Shiqi, 2024; Xie Bing, 2025), ignoring the possibility of it being a key intermediate variable connecting corporate strategic activities (such as innovation) and capital market valuation.

Based on this, this paper attempts to reposition EVA per share (EVApS) as an intermediate mechanism in the process of innovation affecting corporate value. This paper holds that enterprises' innovative activities ultimately need to be transformed into tangible financial performance to be identified and priced by the capital market, and EVApS is an ideal indicator to measure this value creation. Therefore, this study will focus on testing the mediating role of EVApS between innovation and corporate value, in order to more deeply reveal the inherent formation path from innovation to market value.

3. Model Setting and Data Description

3.1. Model Setting

This paper aims to test the impact of Economic Value Added (EVA) on corporate market value, and adopts the following panel data model:

$$\text{TobinQ}_{it} = \alpha_0 + \alpha_1 \text{Invention}_{it} + \alpha_2 \text{Controls}_{it} + \Sigma \text{Year} + \Sigma \text{Ind} + \text{pit} \quad (1)$$

$$\text{EVApS}_{it} = \beta_0 + \beta_1 \text{Invention}_{it} + \beta_2 \text{Controls}_{it} + \Sigma \text{Year} + \Sigma \text{Ind} + \text{pit} \quad (2)$$

$$\text{TobinQ}_{it} = \gamma_0 + \gamma_1 \text{Invention}_{it} + \gamma_2 \text{EVApS}_{it} + \gamma_3 \text{Controls}_{it} + \Sigma \text{Year} + \Sigma \text{Ind} + \text{pit} \quad (3)$$

Among them, the economic meaning and measurement methods of each variable are as follows:

TobinQ: Explained variable, Tobin's Q value, measuring the company's market value (total market value / total assets).

Invention: Core explanatory variable, taking the natural logarithm of the number of patents applied by the enterprise in the current year plus one.

EVApS: Mediating variable, Economic Value Added per share (EVA / total share capital).

WACC: Control variable, Weighted Average Cost of Capital.

Size: Control variable, company size (natural logarithm of total market value).

Lev: Control variable, asset-liability ratio (total liabilities / total assets).

NAPS: Control variable, net asset per share. The variable symbols in the model of this paper are abbreviations for convenience of expression. In the empirical

processing, net asset per share (NAPS) corresponds to the equitypershare indicator in the database.

Σ Year: Year fixed effect.

Σ Ind: Industry fixed effect.

ε : Random error term.

3.2. Data Description

(1) Data Source

This paper takes Chinese A-share listed companies from 2008 to 2024 as the initial research sample. The data is derived from the CSMAR database. Referring to the common practice of empirical research, the following processing has been carried out: (1) excluding financial industry companies; (2) excluding company samples that have been marked as ST or *ST; (3) to eliminate the impact of extreme values, all continuous variables have been winsorized at the 1% and 99% quantiles.

(2) Variable Selection

Table 1. Definition and Descriptive Statistical Analysis of Variables

Variable Name	Symbol	Observations	Mean	Standard Deviation	Minimum	Maximum
Tobin's Q	TobinQ	6965	2.123	1.338	0.839	8.587
Invention Innovation	Invention	9677	2.026	1.725	0.000	6.349
EVA Per Share	EVAPs	9677	0.064	0.697	-2.329	2.519
Cost of Capital	WACC	9677	5.909	1.344	2.983	9.152
Company Size	Size	9677	22.693	1.056	20.643	25.699
Asset-Liability Ratio	Lev	9677	0.396	0.200	0.054	0.948
Net Asset per Share	NAPS	9677	6.769	5.278	0.078	27.493

(1) Explained Variable

Tobin's Q: Measuring the market valuation of the company. Following the common practice of financial empirical research, this paper uses Tobin's Q as a proxy variable for the level of corporate market valuation. This indicator reflects the market's expectations for the company's future growth. To alleviate potential endogeneity problems and more accurately capture the long-term value effect of innovation, this paper uses the lagged one-period Tobin's Q value (i.e., TobinQ_{t+1}) as the explained variable in the model.

(2) Core Explanatory Variable

Invention Innovation: Drawing on the distinction of innovation quality by Li Wenjing and Zheng Manni (2016), this paper uses the number of invention patent applications to measure the substantive innovation activities of enterprises. To alleviate the skewness of data distribution and facilitate interpretation, in the empirical analysis, the number is processed by adding 1 and then taking the natural logarithm.

(3) Control Variables

To control the impact of other factors on corporate value, this paper introduces the following control variables:

Economic Value Added per share (EVApS): Adopting the "Economic Value Added per share (Caliber 1)" data provided by the CSMAR database. This caliber strictly follows the relevant assessment standards of the State-owned Assets Supervision and Administration Commission of the State Council of China, and is widely adopted in domestic academic research, with good authority and comparability.

Cost of Capital: Controlling the difference in corporate financing costs.

Company Size: Controlling the scale effect, measured by the natural logarithm of total market value.

Asset-Liability Ratio: Controlling the capital structure and financial risks.

Net Asset per Share: Controlling the basis of the company's book value.

All control variables are concurrent with the explanatory variables.

4. Empirical Analysis

4.1. Scatter Plots

Figure 1. Scatter Plot of Substantive Innovation and EVA per Share

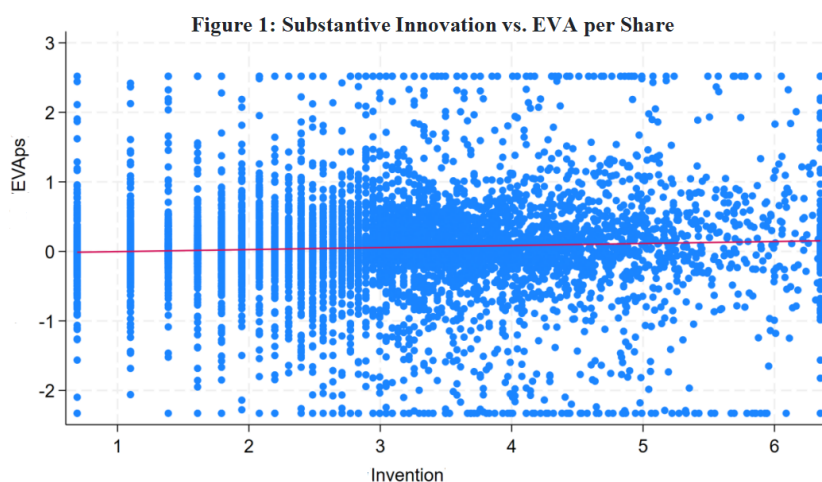
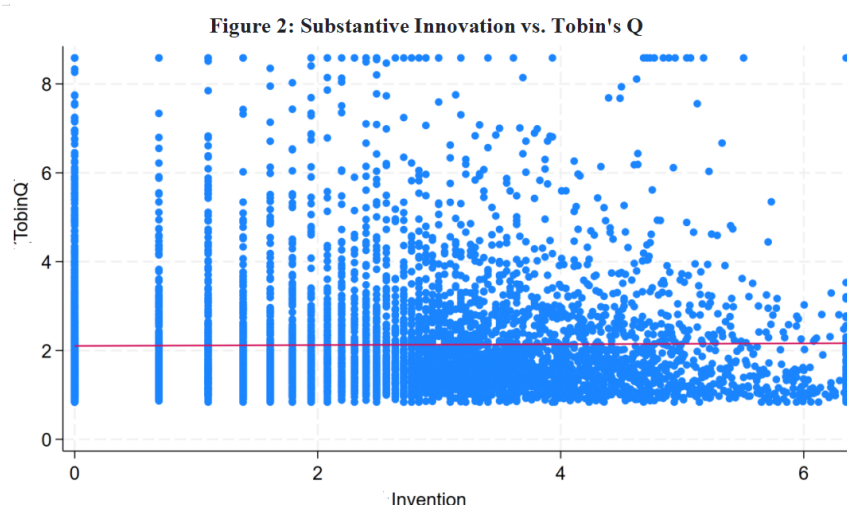


Figure 2. Scatter Plot of Substantive Innovation and Tobin's Q Value

The scatter plot analysis in Figure 1 and Figure 2 initially reveals the core mechanism of this paper. The data show that there is only a weak positive correlation between substantive innovation and current financial performance (EVAs) ($r=0.053$, $p<0.01$), but a significant negative correlation with the corporate market value (Tobin's Q) of the next period ($r=-0.062$, $p<0.01$). This seemingly contradictory phenomenon precisely indicates that the impact of innovation on value is not a direct path: it may make a weak positive contribution to corporate value by improving EVAs, but this positive effect is "suppressed" by a stronger and unknown negative direct effect. The subsequent mediating effect analysis will formally test this inference.

4.2. Modeling Results

Table 2. Regression Results of Substantive Innovation, EVA per Share and Corporate Value

	(1) Model 1	(2) Model 2	(3) Model 3
Invention Innovation	-0.001 (0.011)	-0.022*** (0.006)	0.000 (0.011)
Company Size	0.182*** (0.045)	0.425*** (0.024)	0.163*** (0.046)
Asset-Liability Ratio	-0.574*** (0.199)	-0.561*** (0.081)	-0.555*** (0.200)
Net Asset per Share	-0.055*** (0.009)	0.039*** (0.005)	-0.057*** (0.009)
Cost of Capital	0.006 (0.019)	-0.004 (0.008)	0.006 (0.019)
Year Fixed Effect	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes
Constant Term	-0.848 (0.977)	-8.922*** (0.514)	-0.444 (0.996)
Observations	6965	9677	6965
R ²	0.143	0.238	0.144

Standard errors in parentheses

* $p<0.1$, ** $p<0.05$, *** $p<0.01$

4.3. Robustness Checks

To verify the robustness of our findings, we replace patent counts with R&D intensity (RDSpendSumRatio), measured as R&D expenditure divided by operating revenue (%), as an alternative measure of innovation. Table 3 presents the results.

Contrary to the patent-based analysis, R&D intensity exhibits a significantly positive total effect on Tobin's Q ($\beta = 0.029$, $p < 0.01$). However, it consistently reduces current economic profit (EVApS) ($\beta = -0.029$, $p < 0.01$), echoing our main finding that innovation activities consume short-term resources. When both R&D intensity and EVApS are included in the regression, the coefficient on R&D intensity remains significantly positive ($\beta = 0.038$, $p < 0.01$), while EVApS shows a strong positive association with firm value ($\beta = 0.320$, $p < 0.01$).

The discrepancy between patent and R&D measures suggests that capital markets may differentiate between innovation inputs and outputs. R&D expenditure, as a visible commitment to future growth, receives immediate market recognition. In contrast, patent outputs—though potentially valuable—convey more ambiguous signals, resulting in the suppression effect identified in our primary analysis. Both sets of results, however, confirm the dual nature of innovation: it simultaneously depresses short-term profitability while contributing to long-term value through multiple channels.

Table 3. Robustness Check: Using R&D Intensity as Innovation Measure

	(1) TobinQ	(2) EVApS	(3) TobinQ
RDSpendSumRatio	0.0288*** (0.0031)	-0.0294*** (0.0014)	0.0380*** (0.0032)
EVApS			0.3203*** (0.0302)
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Observations	6269	8893	6269
R ²	0.260	0.327	0.278

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

5. Conclusions

Based on the data of Chinese A-share listed companies from 2008 to 2024, this paper empirically tests the relationship among substantive innovation, Economic Value Added per share (EVApS), and corporate value, and focuses on examining the mediating role of EVApS. The main research conclusions are as follows:

Firstly, the direct promoting effect of substantive innovation on corporate market value is not significant. The benchmark regression results show that the number of invention patent applications has a negative impact on the lagged one-period Tobin's Q value, but it does not pass the significance test. This indicates that the capital market does not directly and immediately convert enterprises' innovative activities into higher market valuations, and the impact of innovation on value needs to be realized through complex intermediate paths.

Secondly, substantive innovation will significantly inhibit the current financial

performance. The first step of the mediating effect test found that the number of invention patent applications is significantly negatively correlated with EVAs at the 1% level. This verifies the theoretical expectation that high-intensity innovation and R&D activities will bring a large number of current expense expenditures, thereby exerting a crowding-out effect on the economic value added that reflects the current real profitability of enterprises.

Thirdly, EVAs plays a “suppression” role between innovation and corporate value, and there is a significant suppression effect. Comprehensive analysis shows that on the one hand, innovation has a negative indirect impact on corporate value by reducing current EVAs, but on the other hand, it has a positive direct impact on corporate value through other unobserved channels (such as shaping technical barriers, improving long-term growth expectations, etc.). The superposition of these two opposite forces leads to the insignificant total effect of innovation in statistics, and the negative mediating path of EVAs “suppresses” the real net value creation ability of innovation.

In summary, the core finding of this study is that the value creation mechanism of enterprises’ substantive innovation is complex and contradictory. It suppresses financial performance in the short term due to resource consumption, but the market can recognize its long-term strategic significance, resulting in the statistical “suppression” of its overall value effect. This conclusion reminds us that we should not simply deny the long-term value of innovation based on short-term financial indicators. Investors and enterprises should have more strategic patience, and regulators also need to design an innovation evaluation system that can tolerate short-term performance fluctuations.

Reference

- [1] Zhi, Y. L., & Teng, Y. H. (2025). Equity Incentive, R&D Investment and Corporate Value — An Empirical Study Based on Data of Sci-Tech Enterprises. *China Collective Economy*, (10), 121-124.
- [2] Wang, S. Q. (2024). Performance Analysis of Listed Companies on the SME Board Based on EVA (Master's Thesis). Harbin Normal University, Harbin.
- [3] Jiang, Q. K., & Li, J. J. (2025). Corporate ESG Rating, Green Technology Innovation and Corporate Value. *Productivity Research*, (09), 104-109.
- [4] Li, K. D., Hu, L. L., Zhang, L. R., et al. (2025). Climate Risk, Green Innovation and Corporate Value. *Finance and Accounting Monthly*, (21), 38-45.
- [5] Xie, B. (2025). An Empirical Study on the Impact of Financial Flexibility on Corporate Value in the Context of Financing Constraints. *Science-Technology and Management for Small and Medium-Sized Enterprises*, (10), 34-36.
- [6] Li, W. J., & Zheng, M. N. (2016). Substantive Innovation or Strategic Innovation? — The Impact of Macroeconomic Industrial Policies on Micro-Enterprise Innovation. *Economic Research Journal*, 51(04), 60-73.
- [7] Qiu, T., Wang, J., Cao, Z. X., et al. (2025). Research on the Impact of Digital Transformation on Corporate Value. *International Business Finance and Accounting*, (20), 3-16.
- [8] Fan, Z. G. (2025). The Impact of ESG Information Disclosure on Corporate Value from the

Perspective of Digital Transformation. China Collective Economy, (29), 77-80.

- [9] Hou, J. X. (2023). An Empirical Study on the Impact of R&D Investment on Corporate Value — Taking China's Pharmaceutical Manufacturing Industry as an Example. Enterprise Reform and Management, (19), 7-9.
- [10] Wang, Y. (2022). An Empirical Study on the Impact of Patent Quality on the Value of GEM Listed Enterprises (Master's Thesis). Shanghai University of Finance and Economics, Shanghai.