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### Stock Price Overvaluation and Digital Transformation Investment of Listed SMEs: Impact Analysis and Path Testing

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# Stock Price Overvaluation and Digital Transformation Investment of Listed SMEs: Impact Analysis and Path Testing

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## 1. INTRODUCTION AND RESEARCH QUESTIONS

As China's economic construction enters a new journey, the development of enterprises is facing many challenges such as slowing market demand and rising comprehensive factor costs, how to achieve "cost reduction, efficiency improvement and quality improvement" has become the key for enterprises in various industries to seek survival and development, and digital transformation is considered to be the only way to achieve this vision. So, with the rapid development of China's digital economy, the concept of digital development is deeply rooted in the hearts of the people, and more and more enterprises have or are undergoing digital transformation. However, the current situation of digital transformation of enterprises in China is not optimistic. Especially for small and medium-sized enterprises with poor resource endowment and technical strength, promoting digital management and transformation requires a lot of capital investment and precipitation costs, and how to choose a scientific digital transformation path according to the characteristics of the industry, scale volume, technological advantages and other characteristics, and formulate a reasonable investment plan, is a practical problem that must be considered to promote digital transformation<sup>1</sup>.

In recent years, with the continuous development and growth of domestic and foreign capital markets, the impact of capital market stock price changes on the investment of enterprises in the real economy has become a new focus of academic research on enterprise investment issues. Scholars at home and abroad generally believe that overvaluation of stock prices plays a significant positive role in promoting investment in the real economy of enterprises and expanding the scale of enterprise investment. But what impact will stock price overestimation have on their digital transformation investment, and through what channels? At present, there is a lack of research in these areas.

Therefore, this paper combines equity financing and rational pandering channel theory<sup>2,3</sup>, and conducts an in-depth study of the influence relationship between stock price overvaluation and the digital transformation investment of listed SMEs in China, so as to provide reference and suggestions for promoting the digital transformation investment of listed SMEs. Our research questions are as follows: (1) Will overvaluation have an impact on the digital transformation of enterprises? (2) What channels do overvaluations affect the digital transformation of enterprises?

## 2. THEORY AND RESEARCH FRAMEWORK

Based on the knowledge-based view and the investment theory, the hypotheses and research framework are proposed herein (Figure 1).

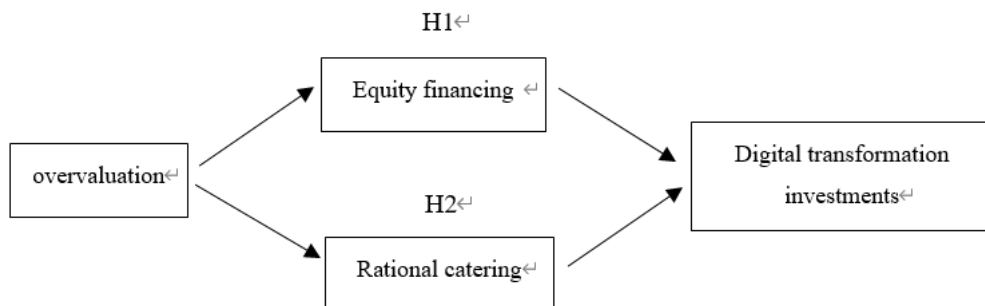


Figure 1. Research framework

The dataset is derived from patent data of listed companies on China's SME Board and GEM from 2013 to 2019, exclude the serious lack of data and ST and \*ST and listed companies in the financial and insurance industry, and exclude the sample of undervalued stock prices. A total of 7129 sets of year-company sample observations were obtained.

### 3. RESULTS AND MAJOR FINDINGS

Based on the investment perspective, this paper takes the data of listed companies on China's SME board and GEM from 2013 to 2019 as the research sample, and conducts impact analysis and path test on the relationship between overvaluation of stock prices and digital transformation input of listed SMEs. Overall, the results of this paper support the equity financing channel hypothesis that overvaluation of stock prices promotes the capital investment of digital transformation of listed SMEs, but does not support the rational catering channel hypothesis.

**Table 1. Regression results**

|                 | (1)                 | (2)                 | (3)                 | (4)                 | (5)                 | (6)                 |
|-----------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                 | $LnDigital_{t+1}$   | $LnDigital_{t+1}$   | $Equity$            | $LnDigital_{t+1}$   | $Short$             | $LnDigital_{t+1}$   |
| <i>Overv</i>    | 0.054***<br>(0.009) | 0.037***<br>(0.011) | 0.153***<br>(0.007) | 0.034***<br>(0.011) | 1.207***<br>(0.096) | 0.038***<br>(0.011) |
| <i>Equity</i>   |                     |                     |                     | 0.071***<br>(0.023) |                     |                     |
| <i>Short</i>    |                     |                     |                     |                     |                     | 0.021<br>(0.017)    |
| <i>Controls</i> | No                  | Yes                 | Yes                 | Yes                 | Yes                 | Yes                 |
| <i>N</i>        | 7129                | 7129                | 7129                | 7129                | 7129                | 7129                |
| <i>r2</i>       | 0.301               | 0.311               | 0.519               | 0.311               | 0.375               | 0.311               |

### 4. CONTRIBUTIONS

The research conclusions of this paper have strong practical and theoretical significance. On the one hand, based on real data samples, this paper analyzes the impact analysis and path test on the relationship between stock price overvaluation and digital transformation capital investment of listed SMEs from the empirical level, verifies the existence of equity financing channels, and enriches the theoretical re-search on the fields related to stock price overvaluation and digital transformation of SMEs. On the other hand, currently listed SMEs in China are generally facing the problem of insufficient investment in the process of digital transformation, and the research conclusion of this paper shows that overvaluation of stock prices can reduce the cost of equity financing of enterprises and actively create investment opportunities for digital transformation of enterprises. From this point of view, the research conclusions of this paper provide reference ideas for promoting the digital transformation investment of listed small and medium-sized enterprises in China.

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