



Moderating Role of Corporate Governance on the Effect of Innovation Investment to the Financial Performance among Publicly-listed Software Outsourcing Companies in China

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Abstract: This study examines the relationship between innovation investment, corporate governance, and financial performance among publicly listed software outsourcing companies in China. Utilizing a mixed methods approach, the research integrates quantitative analysis of financial and governance data with qualitative insights from structured interviews with Chief Financial Officers (CFOs). The study explores how various corporate governance factors, such as board size, independence, meeting frequency, CEO duality, and compensation, influence the effectiveness of innovation investments in enhancing company performance. Findings indicate that while there is a positive correlation between innovation investment and financial performance, the relationship is not statistically significant. Moreover, corporate governance factors, except for board size, do not significantly moderate this relationship. The results suggest that aligning innovation strategies with strong corporate governance practices is essential but not sufficient to ensure enhanced financial outcomes. The study's findings have practical implications for industry practitioners, policymakers, and investors, emphasizing the need for optimized governance structures to support sustainable growth in the software outsourcing sector. However, limitations regarding data reliance, sample size, and sectoral focus are acknowledged, with recommendations for future research to address these constraints and explore additional variables influencing the innovation-performance link.

Keywords: Corporate Governance, Firm Financial Performance, Innovation Investment

1. Introduction

Amid the rapid advancements in global information technology, China's software service outsourcing industry has attained remarkable achievements over the past few decades. Many companies have become key players in the Chinese economy through listing. China's listed software companies occupy an important position globally. Their development is not only related to the competitiveness of the country's information technology industry but also has an important impact on the international market, providing software solutions and services to global customers. However, as competition in the global market becomes increasingly fierce, Chinese software companies are facing pressure from international competitors and need to continuously improve performance and increase investment in R&D to remain competitive.

Company performance is a key measure of business success. Investors, shareholders, and other stakeholders often evaluate a company's performance through measures such as financial performance, market capitalization, and customer satisfaction. This study will explore the financial performance of China's listed software companies, including factors such as revenue growth, profitability, and market capitalization, to understand their position in the market.

Corporate governance is crucial to the long-term development of listed companies. Through a standardized corporate governance structure, companies can better respond to market risks, strengthen internal controls, and ensure transparency and compliance. This study will deeply explore the corporate governance practices of China's listed software companies, including the impact of CEO compensation, shareholder independence, and board size [1].

In the software industry, investment in R&D is critical to a company's long-term competitiveness. As technology continues to evolve, increasing R&D investment can help companies launch innovative products, improve service quality, and adapt to changes in market demand [2]. However, for listed companies, balancing the relationship between R&D investment and financial performance is an important challenge.

By studying the corporate performance and R&D investment of China's listed software service outsourcing companies in-depth, we can better understand the dynamics of this industry, provide useful information to enterprises, investors, and policymakers, and promote the sustainable development of China's software industry [3].

1.2 Review of Related Literature

1.2.1 Corporate Governance

Corporate governance refers to how companies are run and to what purpose, and is primarily a set of tools that allows management and the board of directors to operate a business more efficiently and effectively [4]. It is described in this research as a company's method and processes for ensuring that they operate in a way that meets its objectives while also ensuring that its stakeholders benefit.

1.2.2 Financial Performance



This is a complete evaluation of a company's overall standing in categories such as assets, liabilities, equity, expenses, revenue, and overall profitability [5]. In this study, this refers to internal performance measured by ROA and ROE, and external performance measured by MBR.

The study examines several key factors of corporate governance and their influence on innovation investment and financial performance. One such factor is board size, which refers to the total number of directors on a company's board. The size of the board can significantly affect the effectiveness of decision-making processes. Larger boards may bring a wider range of perspectives and expertise, which can enhance the company's innovation strategies [6]. However, the downside of larger boards is that they can also slow down decision-making, potentially diluting the impact of innovation investments on financial performance [7].

Another critical factor is board independence, which measures the proportion of independent directors—those not involved in the day-to-day management of the company—on the board. A higher level of board independence is typically associated with better oversight and a reduced risk of conflicts of interest [8]. In the context of innovation investment, an independent board may encourage more thorough evaluation and monitoring of research and development (R&D) projects. However, the study finds that this increased oversight does not significantly impact financial performance [9].

The frequency of board meetings is also explored as a key factor. More frequent board meetings can lead to better governance by allowing for more timely oversight and strategic adjustments [10]. Despite this, the research suggests that while there is a positive correlation between the number of board meetings and financial performance, this relationship is not statistically significant [11].

CEO duality is another factor of interest, referring to situations where the roles of CEO and Chairman of the Board are held by the same person. This concentration of power can streamline decision-making but may also reduce the board's independence [12]. The study investigates how CEO duality interacts with innovation investments and finds that it does not significantly moderate the effect on financial performance [13].

Lastly, CEO compensation is considered a crucial factor in aligning the interests of the CEO with those of shareholders. Higher compensation packages might incentivize CEOs to pursue riskier innovation projects that could yield higher returns [14]. However, the study indicates that, while there is a correlation between CEO compensation and financial performance, this relationship does not significantly influence the impact of innovation investment [15].

1.2.3 Innovation Investment

Innovation investment refers to the allocation of financial resources, capital, and funding toward activities, projects, or initiatives aimed at fostering innovation within an organization [16]. In this study, it refers to the ratio of the amount invested by a company in research and development costs against its operating income.

1.2.4 Board Independence

According to Wheelen et al. [17], board independence refers to the extent to which a company's board of directors is composed of individuals who are not involved in the day-to-day management of the company and are free from any significant financial or familial ties with the company and its executives. It is commonly measured by the proportion of independent directors on a company's board [18]. In this study, it refers to the proportion of independent directors to the total number of directors on the board.

1.2.5 CEO Compensation

CEO compensation refers to the total financial package, including salary, bonuses, stock options, and other perks, awarded to a Chief Executive Officer (CEO) of a company. It is recommended to consult recent financial reports, proxy statements, or relevant corporate governance documentation of individual companies, as executive compensation practices can vary across organizations and industries [19]. In this study, it refers to the salaries and other financial benefits given to the CEO of a company.

1.2.6 CEO Duality

CEO duality means that one person is responsible for both the CEO and Chairman of the Board roles [20]. In this study, it refers to the roles of CEO and Chairman of the Board being performed by the same person.

1.2.7 Number of Board Meetings Held

This refers to the total count of formal gatherings or sessions conducted by a board of directors within a specified period. The frequency and structure of board meetings can vary based on the company's bylaws, industry practices, and regulatory requirements [21].

1.2.8 Board Size

Board size refers to the total number of people on the board of a firm [22]. In this study, it also refers to the total number of people on the board of directors of a company.

1.2.9 Return on Assets (ROA)

ROA is a measure of the overall effectiveness of management in generating profits with all its available assets [23]. In this study, it is essentially a comparison of how good a company is at utilizing its assets to create profit.

1.2.10 Return on Equity (ROE)

ROE is a measure of the return earned on the common stockholders' investment in the firm [24]. This research examines a company's profitability by demonstrating how much profit it creates with the money invested by shareholders.

1.2.11 Market to Book Value Ratio (MBR)

MBR is a financial metric that compares a company's market value to its book value. It is widely used by investors and analysts to assess the relationship between a company's market price per share and its book value per share [25]. In this study, it refers to an external performance measure which is the ratio of market value to book value.

1.3 Theoretical Framework

The present research is based on the work of Rabi, Zulkafli, and Che Haat [26], who explored the moderating influence of corporate governance on the impact of innovation investment on the performance of Malaysian publicly listed companies. The findings suggest that investors should consider the nature of corporate governance characteristics in analyzing the R&D investment made by firms. The research reveals a negative and significant correlation between R&D spending and both ROE and ROA, suggesting that higher R&D expenditures may lead to reduced net returns and suboptimal financial performance.

Additionally, Rabi, Zulkafli, and Che Haat [26] find that board compensation has a positive impact on the relationship between R&D spending and ROE/ROA, indicating that effective compensation methods contribute to enhanced overall firm performance through R&D projects. Moreover, an increased frequency of board meetings moderates the connection between R&D spending and ROA, suggesting that more meetings lead to improved firm performance by allowing thorough evaluations and monitoring of R&D projects. In conclusion, the research underscores the significance of considering corporate governance in analyzing firms' R&D investments. While certain governance mechanisms may not guarantee improved future performance from R&D investments, the study suggests that well-structured board compensation and frequent board meetings are crucial for ensuring positive returns from R&D endeavors in the future. Consequently, when assessing a firm's innovation investment, investors should scrutinize its corporate governance characteristics, as they play a pivotal role in determining the effectiveness of innovation investments in enhancing overall firm performance.

According to Ali [27], a firm's financial performance is measured through two aspects, i.e., internal performance and external performance. For measuring a firm's internal financial performance, accounting tools were used, which include ROA and ROE. ROA indicates what profit the company is earning against its available resources such as assets, and ROE indicates how much the company is earning in relation to the investment of shareholders. Both these indicators bring out the internal performance of the company and show the earning aspect of the company. A firm's external financial performance is measured by comparing its market value per share with its book value per share. The book value of the share is determined by dividing total shareholder equity by the total outstanding shares. For analyzing Tobin's Q formula, a technique for measuring MBR is used in which the book value is compared with its market value (the price at which the share is being traded). To ascertain the MBR, the book value is divided by the market value, giving the MBR of the company. This MBR identifies whether the share is overvalued or undervalued, which shows its future direction or movement of the price [28].

Innovation investment (INI) includes some investments such as scientific and technological talents, research and development (R&D) projects, and machinery and equipment. This paper uses the proportion of R&D expenditure to operating income to represent the INI [16].

Corporate governance is the system by which companies are directed and controlled. Many studies are looking deeper at the impact of several governance variables such as board size, board meeting frequency, role duality, non-executive directors, and directors' qualifications on firm performance [29]. Corporate governance has been applied by most organizations as a set of mechanisms to influence the decisions made by agents when there is a separation of ownership and control. By having good corporate governance practices, managerial opportunism can be reduced. In the study of Rabi, Zulkafli, and Che Haat [26], corporate governance is proxied by board size, board independence, the number of board meetings, CEO duality, and CEO compensation. Board size refers to the number of directors on the board. Board independence is the ratio of total outside directors to the total number of board directors. Board meeting refers to the number of board meetings. CEO duality refers to having one person acting as both CEO and chairman of the board. Lastly, CEO compensation pertains to the salary received by CEOs for a particular year.

2. Objectives

This study aims to determine the moderating role of corporate governance on the effect of innovation investment on financial performance among Publicly-listed Software Outsourcing Companies in China. Specifically, it seeks to answer the following:

1. What is the trend of financial performance of publicly listed software outsourcing company in China in the years 2013-2022 in terms of,
 - 1.1 Internal Performance; and
 - 1.2 External Performance?
2. What is the trend of innovation investment of publicly listed software outsourcing company in China in the years 2013-2022?
3. How may the Corporate Governance be described based on the following characteristics:
 - 3.1 Board size;
 - 3.2 Board independence;
 - 3.3 Number of board meetings held;
 - 3.4 CEO Duality; and
 - 3.5 CEO Compensation?
4. What are the challenges encountered by software outsourcing companies related to financial performance, innovation investment and corporate governance?
5. Does innovation investment significantly affect the financial performance?
6. Does corporate governance moderate the effect of innovation investment on financial performance?

7. Based on findings, what IEC may be developed?

3. Materials and Methods

3.1 Research Design

The study employs a mixed methods approach, combining both quantitative and qualitative research methods to provide a comprehensive analysis of the relationship between innovation investment, corporate governance, and financial performance among publicly listed software outsourcing companies in China. The quantitative component involves the collection and analysis of publicly sourced financial and governance data, using statistical techniques such as regression analysis to explore the correlations and significance of various variables. This data-driven analysis is complemented by a qualitative component, which includes structured interviews with CFOs from a sample of the companies. These interviews offer insights into the practical challenges and decision-making processes related to corporate governance and innovation strategies, enriching the quantitative findings with contextual depth and detail. The mixed methods approach allows for a more nuanced understanding of the complex dynamics at play, combining the rigor of quantitative analysis with the depth of qualitative insights.

3.2 Sources of Data

Information from secondary sources was gathered in order to conduct the study. Secondary data was obtained from audited financial reports and other publications by the companies, including information from the company websites for ten years from 2013 to 2022. The data collected from the financial statement were net income and total assets to be used for return on assets (ROA) and total shareholders' equity to compute for the return on equity (ROE). While the market to book value ratio (MBR), was computed by dividing the market value by the book value per share. The market value per share was determined first by collecting the market price per share at the end of each year. Then, the book value was computed from total shareholders' equity divided by the outstanding share at the end of year. The variable innovation investment is based on the ratio of R&D expenditure to operating income. The data for corporate governance are collected also from the annual reports of each company. These are the board size, which is the number of people in the board of directors; board independence which is the number of directors from outside the company divided by the total number of board of directors; the number of board meetings held which is simply the number of meetings conducted by the board during each year; the CEO duality is assigned with a value of 1 to represent the that chairman of the board is also acting as the CEO of a company and 0 if not; and CEO compensation which reflects the amount of salary and other financial packages given to a CEO of each company. In addition, the researchers conducted interviews with CFOs of eight companies.

3.3 Data Gathering Procedure

The researcher first determined which data in the company's annual report data can represent variables of innovation investment/company performance and corporate governance, then download the 2013-2022 annual report from the company's official website, and extracted the required data from it to form initial data. The data computed such as ROA, ROE, MBR, INI, and Board independence. After the needed data were completed they were tabulated and submitted to the adviser, panel and statistician for validation. In addition to collecting secondary data, an interview was also conducted. An invitation to different Chief Financial Officer (CFOs) of outsourcing companies was sent by email. After receiving a reply, the specific interview time was determined. Taking into account the efficiency and effectiveness of the interview, the VOOV meeting method was used to conduct the interview. Questions were sent to respondents 1-2 days before the interview to give them time to think and prepare. During the interview, exchanges and discussions about around the challenges encountered by their respective firms.

3.4 Statistical Treatment of Data

The following tools were used to analyze and interpret the collected data.

Mean. This was used to present the present the financial performance, innovation investment and corporate governance of the publicly listed software outsourcing company in China in the years 2013-2022. This was also used to determine the minimum and maximum values for each variable.

Frequency and Percentage. This was used to present the CEO duality which were assigned with binary digits 1 and 0 which indicate that 1 is where the CEO also acts as chairman of the board and 0 if these functions are separate in each company.

Standard Deviation. This was used to measure the amount of variation or dispersion in a set of values for the financial performance, innovation investment and corporate governance of the publicly listed software outsourcing company in China in the years 2013-2022.

Regression. This was used to establish a mathematical equation that can predict the value of the financial performance (dependent variable) based on the values of the Innovation investment (independent variables) This was also used in determining the moderation of corporate governance on the effect of innovation investment on financial performance.

Graphical presentation. This was used to present the trend of financial performance both in terms of internal (ROA and ROE) and external (MBR) from 2013-2022. This was also used to present the board size, board independence, number of board meetings and CEO compensation.

3.5 Integration of Quantitative and Qualitative Data

The study's analysis is strengthened by the integration of both quantitative and qualitative data. The quantitative component, which includes financial performance metrics and corporate governance variables, provides a broad, statistical view of the relationships under investigation. However, to capture the complexities behind these numbers, the study also incorporates qualitative data through structured interviews and surveys with CFOs of selected companies.

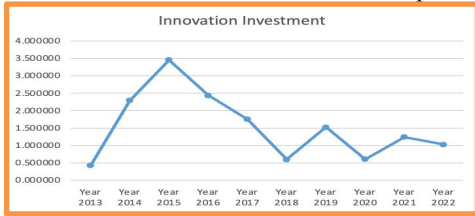
These qualitative insights complement the quantitative data by offering a deeper understanding of the challenges and strategic decisions that influence innovation investments and financial performance. For example, the interviews elucidate why certain quantitative patterns may emerge, such as the lack of a significant statistical effect of innovation investment on financial performance, by exploring factors like market dynamics, risk management practices, and internal governance structures. This integrated approach ensures a more nuanced and comprehensive analysis, bridging the gap between numerical data and the real-world experiences of industry practitioners.

4. Results and Discussion

4.1 Trend of financial performance of publicly listed software outsourcing company in China in the years 2013-2022 in terms of Internal Performance, External Performance



4.2 Trend of innovation investment of publicly listed software outsourcing company in China in the years 2013-2022

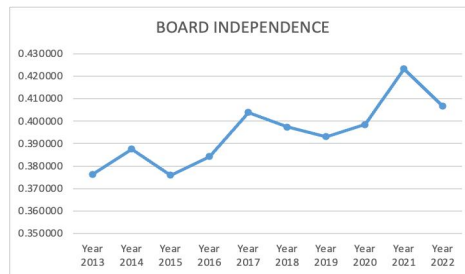


4.3 Corporate Governance be described based on the following characteristics

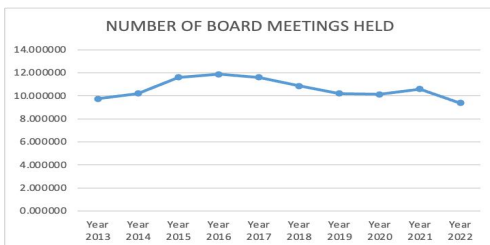
4.3.1 Board Size



4.3.2 Board Independence



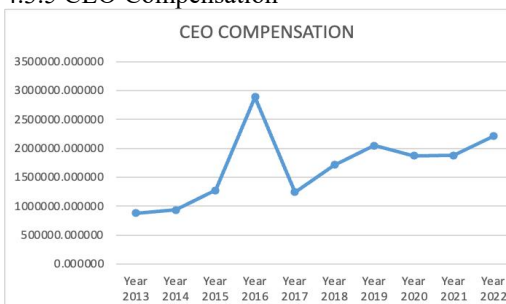
4.3.3 Number of board meeting hold



4.3.4 CEO Duality



4.3.5 CEO Compensation



4.4 Challenges encountered by software outsourcing companies related to financial performance, innovation investment and corporate governance

In the interview, several key themes and challenges emerged that shed light on the company's financial performance, strategic decision-making, and governance practices. Respondents highlighted the challenge of maintaining a positive Return on Assets (ROA) in the face of evolving market dynamics. This involved staying attuned to industry trends, consumer preferences, and technological advancements to ensure that the company's assets generate optimal returns. Achieving a sustainable Return on Equity (ROE) posed challenges related to maintaining

profitability over the long term. This included addressing market uncertainties, competitive pressures, and economic fluctuations to secure a consistent and positive ROE. To tackle challenges in ROE, internal processes and strategies were adjusted. This involved agile decision-making, cost management, and innovation to enhance operational efficiency and ensure the company's consistent and positive financial performance.

Respondents discussed the importance of ensuring that Research and Development (R&D) investments align with the company's goals and objectives. This required a strategic approach to R&D management, monitoring outcomes, and fostering a culture of innovation within the organization. The company faced challenges in striking a balance between short-term financial returns and the imperative for long-term innovation through R&D investments. This required careful strategic planning to manage immediate financial pressures while investing in future growth opportunities. Respondents discussed challenges in ensuring that financial metrics accurately reflected the company's strategic goals. Balancing short-term gains with long-term sustainable growth required a nuanced approach to performance metrics, aligning them with the company's overarching objectives.

Challenges in maintaining a diverse and independent board over time were acknowledged. This involved addressing issues related to board composition, succession planning, and ensuring that the board's expertise aligned with the company's strategic direction.

Overall, the common theme across these challenges was the need for strategic agility, adaptability, and a forward-looking approach to navigate the complexities of the market, innovation, and governance. The company's ability to address these challenges collectively contributes to its overall financial health and sustained growth.

4.5 Effect of Innovation investment on Financial Performance

ROA	B	Std. Error	t-value	p-value	Decision on H ₀	Interpretation
Constant	0.035	0.004	9.315	<0.001	Reject	Significant
Innovation Investment	0.000	0.001	0.220	0.826	Failed to Reject	No Significant Effect

Model Summary: R = 0.010; R² = 0.000

Regression Model: F = 0.048; p = 0.826

The results suggest that, while the constant term has a significant positive effect on ROA, the impact of innovation investment is not statistically significant based on the given data, the negative coefficient suggests a potential negative relationship. However, it's important to note that these findings are specific to the dataset and the variables included in the regression analysis. The lack of

significance for innovation investment may suggest that, within the observed range of innovation investment, it does not have a substantial direct impact on ROA.

ROE	B	Std. Error	t-value	p-value	Decision on H ₀	Interpretation
Constant	0.026	0.024	1.100	0.272	Failed to Reject	Not Significant
Innovation Investment	0.002	0.004	0.467	0.641	Failed to Reject	No Significant Effect

Model Summary: R = 0.021; R² = 0.000

Regression Model: F = 0.218; p = 0.641

The analysis results show that a T-value greater than 0 indicates a positive correlation between innovation investment and firm performance, but the P-value corresponding to the F-value is 0.641 and greater than 0.05, indicating that although innovation investment has a positive correlation with firm performance, it does not have a significant impact. However, it's important to note that

these findings are specific to the dataset and the variables included in the regression analysis. The lack of significance for innovation investment may suggest that, within the observed range of innovation investment, it does not have a substantial direct impact on ROE.

Market to Book Ratio	B	Std. Error	t-value	p-value	Decision on H ₀	Interpretation
Constant	5.064	0.380	13.330	<0.001	Reject	Significant
Innovation Investment	0.035	0.061	0.571	0.568	Failed to Reject	No Significant Effect

Model Summary: R = 0.025; R² = 0.001

Regression Model: F = 0.326; p = 0.568

The results suggest that, while the constant term has a significant positive effect on MBR, the impact of innovation investment is not statistically significant based on the given data, the negative coefficient suggests a potential negative relationship. However, it is important to note that these findings are specific to the dataset and the variables included in the regression analysis. The lack of

significance for innovation investment may suggest that, within the observed range of innovation investment, it does not have a substantial direct impact on MBR.

4.6 Moderating Effect of Corporate Governance on the Effect of Innovation investment to Financial Performance

ROA	B	Std. Error	t-value	p-value	Decision on H ₀	Interpretation
Constant	0.035	0.004	9.646	<0.001	Reject	Significant
Board Size * Innovation Investment	0.003	0.005	0.509	0.611	Failed to Reject	No Significant Effect
Board Independence * Innovation Investment	-0.002	0.004	-0.432	0.666	Failed to Reject	No Significant Effect
Number of Board Meetings * Innovation Investment	0.003	0.004	0.896	0.370	Failed to Reject	No Significant Effect
CEO Duality * Innovation Investment	-0.002	0.005	-0.374	0.709	Failed to Reject	No Significant Effect
CEO Compensation * Innovation Investment	0.005	0.011	0.481	0.630	Failed to Reject	No Significant Effect

Model Summary: R = 0.051; R² = 0.003

Regression Model: F = 0.272; P = 0.928

ROE	B	Std. Error	t-value	p-value	Decision on H ₀	Interpretation
Constant	0.030	0.024	1.259	0.209	Failed to Reject	Not Significant
Board Size * Innovation Investment	0.009	0.034	0.248	0.805	Failed to Reject	No Significant Effect
Board Independence * Innovation Investment	-0.021	0.024	-0.892	0.373	Failed to Reject	No Significant Effect
Number of Board Meetings * Innovation Investment	0.023	0.023	0.993	0.321	Failed to Reject	No Significant Effect
CEO Duality * Innovation Investment	0.017	0.034	0.508	0.612	Failed to Reject	No Significant Effect
CEO Compensation * Innovation Investment	-0.023	0.071	-0.330	0.741	Failed to Reject	No Significant Effect

Model Summary: R = 0.049; R² = 0.002

Regression Model: F = 0.250; P = 0.940

Market to Book Ratio	B	Std. Error	t-value	p-value	Decision on H ₀	Interpretation
Constant	5.124	0.371	13.816	<0.001	Reject	Significant
Board Size * Innovation Investment	0.190	0.543	0.349	0.727	Failed to Reject	No Significant Effect
Board Independence * Innovation Investment	0.217	0.376	0.577	0.564	Failed to Reject	No Significant Effect
Number of Board Meetings * Innovation Investment	-0.049	0.366	-0.135	0.892	Failed to Reject	No Significant Effect
CEO Duality * Innovation Investment	-0.429	0.536	-0.800	0.424	Failed to Reject	No Significant Effect
CEO Compensation * Innovation Investment	0.803	1.120	0.717	0.474	Failed to Reject	No Significant Effect

Model Summary: R = 0.046; R² = 0.002
Regression Model: F = 0.216; P = 0.955

4.7 Information, Education and Communication

It was revealed in this study that corporate governance does not significantly moderate the effect of innovation investment to financial performance among the listed software outsourcing companies in China during 2013 to 2022. Based on these findings, an IEC material was developed. It aims to provide research ideas and data references for analyzing financial data, innovation investment, and corporate governance of listed outsourcing software companies. It aims to aid in the policy research, company management decision-making, school teaching, and many other aspects.

In order to disseminate this IEC material widely and expand its influence, the following dissemination methods can be adopted. Publishing the material on the organization's official website, related platforms, or social media to reach a wide online audience. The material will also be printed in volumes and distributed to partners, stakeholders, researchers, and the interested public.

Seminars and lectures with invited guests and experts may also be organized to discuss the topic of innovation investment, corporate governance and financial performance. Partnerships and collaborations with other organizations, research institutes, or advocacy organizations may also be initiated by the researcher to jointly promote and disseminate this IEC material. Through a variety of communication methods, this IEC material may be communicated to a wider audience and promote a deeper understanding and awareness of the relationship between innovation investment, corporate governance and financial performance.

5. Conclusion

Based on the important findings of the study, the following conclusions are drawn:

The trend of internal Performance (ROA) increased slowly in the two years from 2013 to 2015, then the shock drops and the lowest in 2022. The trend of internal Performance (ROE) increased slowly in the four years from 2013 to 2016, the lowest point reached in 2021. The trend of internal Performance (MBR) After a rapid decline in the first two years, it rose rapidly in the next two years, and then declined with a slight shock.

The trend of innovation investment increased rapidly in the two years from 2013 to 2015, declined rapidly from 2015 to 2018 and slightly increased up to 2021 and eventually declined in 2022.

Through the analysis of secondary data, board size among corporate governance variables has a significant moderating effect on the relationship between innovation input and the company's internal performance. The remaining variables have no significant impact on the relationship between firm performance and innovation input.

Ho1: Innovation investment do not significantly affect the firm performance. The P values of innovation investment on internal performance ROA and ROE and on external performance MBR are all greater than 0.05, indicating that there is no significant relationship between the two. The null hypothesis holds, Innovation investment do not significantly affect the firm performance.

Ho2: Corporate governance does not moderate the effect of innovation investment on firm performance.

All variables of corporate governance such as Board size, CEO Compensations, CEO duality, Board dependence and Number of board meetings have no significant impact on the relationship between corporate performance and innovation input.

Application of Findings

For companies, understanding that innovation investment alone may not significantly enhance financial performance underlines the importance of aligning these investments with strong corporate governance practices. Business leaders should focus on optimizing board size, ensuring a higher proportion of independent directors, and conducting regular board meetings to improve oversight and strategic decision-making. Additionally, companies should consider the role of CEO compensation and CEO duality in their governance structures, ensuring that these factors are aligned with long-term innovation and financial goals. For policymakers, the study suggests that regulatory frameworks should encourage transparency and accountability in corporate governance, particularly in industries where innovation is a key driver of growth. By promoting best practices in board composition and executive compensation, policymakers can help create an environment where innovation investments are more likely to yield positive financial outcomes.

Investors can also benefit from these findings by taking into account the quality of corporate governance when evaluating potential investments in the software outsourcing industry. A company's commitment to good governance practices could be a key indicator of its ability to effectively manage innovation and achieve sustainable financial performance.

Despite the valuable insights provided, this study has several limitations that should be considered. The reliance on secondary data introduces potential biases related to reporting standards and the accuracy of financial and governance information. The qualitative component, though enriching, is based on a relatively small sample size, which may limit the generalizability of the findings. Additionally, the study's focus on publicly listed software outsourcing companies in China may restrict the applicability of the results to other sectors or regions. The timeframe of the data collection (2013-2022) may not fully capture long-term trends or recent market developments. Finally, the study's emphasis on corporate governance factors may have overlooked other influential external variables. Future research could address these

limitations by expanding the sample size, including more diverse data sources, and exploring additional factors that may impact the relationship between innovation and financial performance.

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