Exploring the Impact of Post-Investment Management on Investment Performance: Evidence from Chinese Equity Investment Funds

Feng Yu
Trinity Business School
Trinity College Dublin
DP29 Dublin. Republic of Ireland
elwynn.yu@hotmail.com

Hongrui Cui
Beijing Liyan Institute for Finance &Development
100020 Beijing, China
hongrui.cui@lifd.org.cn

Guizhou Wang
Faculty of Science and Technology
University of Stavanger
4036 Stavanger, Norway
guizhou.wang@uis.no
ORCID: orcid.org/0000-0001-5297-8105

September 10, 2023

Keywords: Post-investment management, investment funds, equity investment, investment performance, questionnaire survey, regression model

JEL Classification Numbers: G24.
Competing Interests: On behalf of all authors, the corresponding author states that no conflict of interest exists.
Declarations of Interest: None.
Funding: No funding was received.
Data availability: The article contains no associated data. All data generated or analyzed during this study are included in this published article.

Abstract
Post-investment management is an essential element in the functioning of equity investment funds. The question of whether post-investment management can improve the investment performance of institutions is still controversial. The related empirical study is limited. The article examines the impact of post-investment management on investment performance. The questionnaire survey data from 96 domestic mainstream institutions is adopted. The results show that that post-investment management has a positive effect on the performance of investment funds. The better the performance of investment funds measured by the overall exit rate and the proportion of listed IPO exits. However, post-investment management has a limited role in promoting the exit rate of investment funds. Post-investment management and investment performance are inverted U-shaped. Investment institutions

need to strike a balance between tapping and investing in high-quality potential companies and post-investment management. Excessive post-investment management may even reduce investment performance.

1. Introduction

Equity investment funds are commonly structured as partnerships between two entities: the Limited Partner (LP) and the General Partner (GP), see Figure 1. LPs, e.g. pension funds, endowments, insurance companies, or high-net-worth individuals, contribute the majority of the capital to the fund. LPs usually have limited liability and do not participate in the fund's management or decision-making process. GPs, also known as the fund managers, have the responsibility for the operations and investment decisions of the equity fund while contributing a smaller portion of the fund's capital. GPs earn management fees, typically calculated as a percentage of the committed capital, which help cover operational costs. Additionally, GPs share in the fund's profits through carried interest, a percentage of the investment profits as outlined in the limited partnership agreement.

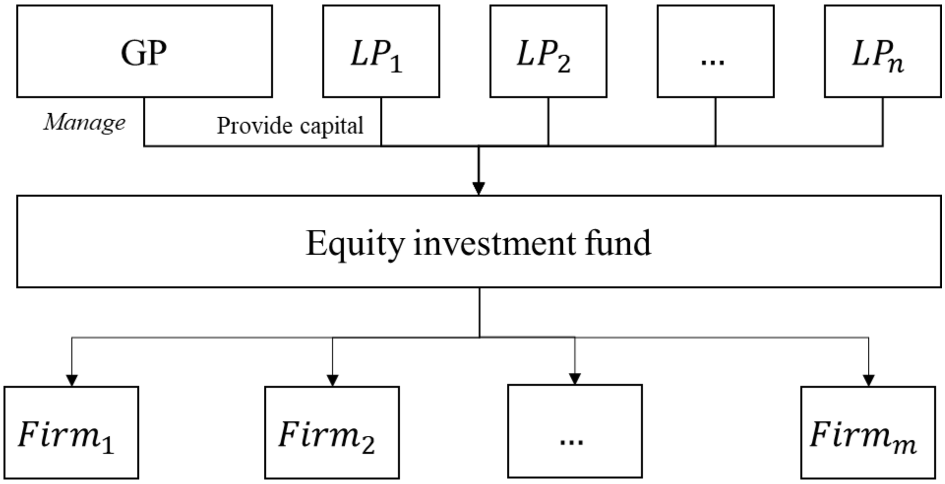

Figure 1 A typical structure of GP and LP based equity investment funds.

Post-investment management plays a crucial role in equity investment funds. Equity investors provide assistance and support with the objective of safeguarding and enhancing the value of invested firms during post-investment. The operational flow of equity investment funds is commonly divided into four stages, i.e. fundraising, investment, management, and exit. The fundraising stage is the beginning of the fund's operational activities. It aims to raise funds from LPs. GPs function as both fundraisers and administrators, responsible for the operational management of the fund in accordance with the fund contract's provisions. During the investment stage, equity fund managers try to find target firms, gather information, followed by negotiation, and signing of investment agreements. The funds are then invested in the firms. The management stage involves assigning dedicated professionals to monitor the development progress of the invested firms, facilitate industry resources, and enhance the growth rate and performance. The exit stage represents the harvest phase of equity fund investments. Typically, equity investment funds have a predetermined lifespan, e.g. a common model is "5+2" model, wherein the investment period (closed-end period) spans five years, and the exit period is two years. In some extreme cases, the investment period is seven years. LPs are restricted from exiting during the closed-end period, but after the completion of the five-year term, they have the option to exit or extend the term for an additional two years before exiting, resulting in a total period of seven years.

Post-investment management goes beyond supervision and risk monitoring of invested firms by equity investors. It includes providing value-added services such as strategic planning support, introducing professional personnel and executives, offering follow-up financing assistance, strengthening corporate governance structures, and developing plans for capital market expansion. The ultimate objective is to maximize returns for equity investment funds. In general, post-investment management can be categorized into the following five areas. First, business management involves monitoring the invested firms' operating environment, performance, and financial data. Second, human capital focuses on introducing senior management, technical talents, and providing training and development support to the invested firms. Third, capital operations assist the invested firms in market value management, seeking and negotiating M&A targets, providing financing assistance, preparing for IPOs, and tracking fund exit plans. Fourth, business development and resource coordination encompass equity investors providing industry resources, facilitating market expansion, and coordinating with suppliers and industry stakeholders. Fifth, internal monitoring involves overseeing corporate governance, business performance, significant risks, and formulating response measures. Additionally, regular summarization and preparation of fund return reports, analysis reports on invested firms, and other relevant materials are conducted.

Three prevalent modes of post-investment management are integrated pre- and post-investment, professionalization, and external professionalization. The integrated pre- and post-investment mode entails equity investors assuming responsibility for the entire process from due diligence to ongoing monitoring. This mode is focused and provides incentives for equity fund managers, although it becomes increasingly challenging to effectively manage multiple tasks as the number of investment firms grows. The professionalization mode involves establishing an independent post-investment team tasked with activities such as resource integration, tracking, and active involvement in management and operations, resulting in substantial benefits for the invested firms. However, this mode necessitates considerable time costs for coordination between investors and the post-investment team. The external professionalization mode delegates these responsibilities to third-party professional institutions, e.g. consulting companies. The primary challenge of this mode lies in evaluating the performance of both parties. Table 1 summarizes the three types of post-investment management.

Table 1 Summary of the three types of post-investment management

	Integrated pre- and post-investment	Professionalization	External professionalization
Responsibility	Equity investment managers	Post-investment management team	Professional institutions
Professionalism	Low	Moderate	High
Appraisal	Linked to investment managers' performance	Subjective	Based on the agreements
Fee	Free	Free	Paid to external professional institutions
Applicable situation	Venture capital, small equity fund	Medium equity fund	Large equity fund, buyout fund

Investment institutions need to possess professional competence, communication and coordination skills, and industry expertise to meet the high requirements of post-investment management. The importance of post-investment management is a topic of debate within the investment community. Critics claim that the firm itself possesses superior market understanding compared to investment teams, suggesting that the key to investment success lies in selecting promising projects. Conversely, advocates argue that post-investment management plays a vital role in the successful development of firms. They emphasize that optimizing and refining post-investment management practices can enhance firms' overall success and mitigate investment risks.

This article explores the impact of post-investment management on the performance of equity funds. Therefore, a comprehensive survey is conducted among mid-level and senior personnel, and post-investment professionals, from a diverse sample of 96 investment institutions. The goal of the survey is to measure the level of importance assigned to post-investment management by these institutions. The article focuses on analyzing the relationship between the perceived importance of post-investment management and the exit rates of funds. By examining the exit rates, which serve as an indicator of fund performance, valuable insights could be gained into the role and impact of post-investment management practices.

The selected equity investment institutions represent prominent players in the industry, with the majority established between 2009 and 2011. This timeframe ensures that the funds analyzed have reached a critical stage of their lifecycle, e.g. the 7 to 9-year exit period. As such, the findings obtained from this research provide a realistic assessment of the funds' actual performance. The article contributes valuable insights to the impacts of post-investment management. Understanding the role of post-investment management is important for fund managers and investors seeking to optimize equity investment funds.

2. Literature

Literatures commonly explore venture capital and the performance of invested firms. Barry et al. (1990) propose the screening and monitoring theory. They find that venture-backed firms outperformed non-backed firms. The theory identifies three stages: screening, monitoring, and management. Venture capitalists offer support and value-added services during the management stage, including financial planning, introducing investors, and aiding talent and technology recruitment. This theory provides a structured framework for venture capitalists to assist businesses in achieving growth and profitability. Gompers (1996) propose the name-dropping theory. The theory suggests that newly established venture capital firms accelerate the listing of invested companies to demonstrate their strength and establish market credibility quickly. These invested firms, compared to those supported by mature venture capital firms, tend to have higher underpricing rates and lower venture capital ownership. The theory highlights the vital role of venture capitalists in providing financing, market credibility, and brand recognition to entrepreneurial companies. Chemmanur et al. (2011) explore the efficiency benefits of venture capital for private firms. The result suggests that venture capital-backed firms have higher overall efficiency than non-venture capital-backed firms, which comes from both selection and monitoring effect. Hochberg (2012) explores the governance changes in entrepreneurial firms transitioning from private to public ownership with venture capital support. He finds that that venture capital-backed firms have lower earnings management and a more independent board structure compared to similar non-venture capital-backed firms. Croce et al. (2013) discover that venture capital has a crucial impact on on-site involvement with invested firms. In addition, venture capitalists can strengthen interactions with the firm's management, mitigate conflicts during the management process, and enhance both the innovation level and the success rate of investment exits. Dutta and Folta (2016) examine add-in value generated by private equity investors in entrepreneurial development. They find that venture capital-backed firms have a greater influence in terms of innovation and undergo a faster commercialization process. Han et al. (2020) find that while VC may not effectively screen out high-quality firms, it does have a positive impact on the performance of invested firms by enhancing operational efficiency, innovation, and providing industry experience and resources.

The impact of post-investment management on investment performance remains largely unexplored and lacks empirical evidence. Mason and Harrison (1996) examine three aspects of the informal venture capital, i.e. the investment process, the post-investment experience and the investment performance. The research is based on data gathered through telephone interviews with 31 business angels and 28 owner-managers. They highlight the deficiencies in the understanding of venture capital market. Hassan and Leece (2008) use a questionnaire-based methodology and focuses on the post-investment behavior of venture capital firms. They highlight that the source of funding for venture capital firms has a significant impact on their behavior and approach. Metrick and Yasuda (2011) emphasize the significance of private ownership and draw attention to the presence of information asymmetry and illiquidity that are typically associated with private equity. Gurău and Dana (2020) investigate the systemic relationship between financing paths, accessed resources, management and governance structures, and their impact on corporate entrepreneurship in early-stage biotechnology firms. They suggest that equity financing paths provide specific levels of operant and operand resources. Chen (2022) explores the impact of private equity participation on business performance and innovation ability. The study reveals that private equity investment significantly decreases return on assets (ROA) for firms in the innovation layer of the National Equities Exchange and Quotations. However, it has a positive and significant impact on firms' technology investment ratio. Overall, the current literature offers valuable insights on equity funds and venture capital, but further empirical evidence on the impact of post-investment management on investment performance is needed.

3. Methodology

3.1. Data sources

This article uses data collected from surveys and interviews with professionals working in venture capital, private equity, and angel investment organizations in China. The survey lasted for one year and included 96 organizations with fund sizes ranging from hundreds of millions to billions of yuan. The sample represents a diverse range of funds and is considered representative. The survey participants are mainly senior executives and post-investment professionals from investment institutions. For the empirical analysis, the article focuses on 31 equity funds managed by well-known investment managers active in the Chinese market. These funds are selected because they are representative of the Chinese equity market and are established between 2009 and 2011, which means they have already entered the exit phase. The data obtained for the analysis mainly comes from exit cases, which provide valuable insights into fund performance. The exit data is collected from various sources, e.g. Tianyancha (www.tianyancha.com), PEDATA MAX (https://max.pedata.cn), CVSource (https://www.cvsource.com.cn), listed company reports, and survey questionnaires. Table 2 presents a summary of the information on these 31 equity investment funds.

Table 2 Overview of the 31 investment institutions and equity investment funds.

Type	GP	Equity investment fund name	Established date
VC	Aozhi Capital	Huaao Venture Fund	2009-12
VC	Junlian Capital	Junlian Fund 1	2009-09
VC	Songhe Capital	Songhe Excellent Fund	2009-01
VC	Dachen Venture	Dachen Creation Prosperity	2010-03
VC	Shenzhen Venture	Shenzhen Creation	2010-03
VC	Lihe Qingyuan Capital	Tianjin Lihe Chuangying	2010-05
VC	Eastern Fortune	Eastern Fortune Wuhu Equity	2010-12
VC	Zhejiang Business Venture	Zhejiang Xinhai Entrepreneurship	2011-05
Angel	Fenxiang Investment	Kunshan Fenxiang	2011-10
Angel	Jiuhe Venture	Jiuhe Yunqi Investment	2011-08
Angel	Gobi Venture	Gobi Yingzhi	2011-08
VC	Detong Capital	Detong Kaidi	2010-04
VC	Yunfeng Fund	Shanghai Yunfeng Investment	2010-12
VC	Qiming Venture	Qiming Venture Fund 2	2011-11
VC	He Yuan Capital	Heyuan Beijiguang	2011-08
VC	Yuanxing Capital	Yuanxing Capital Kexing	2011-06
VC	IDG	Beijing Harmony Growth Investment Center	2011-08
VC	Xinzhongli	Beijing Xinzhongli Equity Investment Center	2011-09
VC	Saif Fund	Saif Xiangrui	2011-01
PE	Jishi Capital	Zhufeng Jishi Equity Investment	2011-07
PE	Jiuding Venture	Yongle & Zhouyuan Jiuding	2011-03
PE	Zhongxing Venture	Zhonghe Chunsheng No. 1 Equity	2010-11
PE	Fukun Venture	Fukun Yangtze River Winning Communication Venture	2011-11
PE	Tongchuang Weiye	Nanhai Growth Fund 3	2009-08
PE	Hongyi Investment	Hongyi RMB Fund 2	2010-08
PE	Dinghui Investment	Dinghui Weixin Weisen	2010-05
PE	Zhongke Investment	Changzhou Zhongke Jiangnan	2011-08
PE	Fosun Capital	Fuxing Chongfu	2011-03
PE	Chuangdongfang	Chuangdongfang Fuhong	2011-04
PE	CITIC Industry Fund	CITIC Equity Investment Fund 3	2011-10
VC	Tiantu Capital	Tianjin Tiantu Xinghua Equity Investment	2011-04

3.2. *Variables*

Table 3 summarizes the variables in this article.

Table 3 Variable definition.

Variable	Definition
$Level$	The scale of importance that investment institution employees evaluate their

	institutions' focus on post-investment management. $Level = 3$ represents high level of importance, $Level = 2$ represents moderate level of importance, and $Level = 1$ represents low level importance.
$Team$	The number of post-investment management teams in the investment institution. $Team = 4$ indicates a team size over 20. $Team = 3$ indicates a team size between 11-20. $Team = 2$ indicates a team size between 6-10. $Team = 1$ indicates a team size below 5.
$Fund$	The size of the equity investment fund measured in billions of yuan.
Inv	The number of invested firms.
$Exit$	The ratio between the number of exited firms and the total number of firms invested by the equity investment fund. The way of exited including IPO exit, acquisition exit, transfer exit.
IPO	The percentage of firms that exited through IPO, out of the total number of firms invested by the investment fund.

3.3. The model

The article applies $Level$, i.e. the scale of importance of post-investment management evaluated by employees of the equity investment institutions, and $Team$, i.e. the number of post-investment teams in the equity investment institutions, to measure the importance attached to post-investment management. The performance of the equity investment institutions is measured by $Exit$, i.e. the exit rate of the equity funds. In general, the higher the importance attached to post-investment management, the more human resources invested in post-investment management, the higher the perceived importance of post-investment management by employees in the equity investment institutions. Using the exit rate $Exit$ as the dependent variable and the scale of importance of post-investment management evaluated by employees $Level$, the number of post-investment team $Team$ as the independent variables, and the fund size $Fund$ and the number of invested firms Inv as control variables, the article applies the following regression models:

The article uses $Level$ and $Team$ as proxy variables to measure the level of post-investment management importance. $Exit$ measures the equity investment institutions' performance. Higher importance means more resources invested and higher perceived importance by employees in the equity investment institutions. The following regression models are established:

$$
\begin{aligned}
Exit_i &= c_1 + \beta_L Level_i + \beta_F Fund_i + \beta_I Inv_i + \varepsilon_i \\
Exit_i &= c_2 + \beta_T Team_i + \beta_F Fund_i + \beta_I Inv_i + \varepsilon_i \\
Exit_i &= c_3 + \beta_L Level_i + \beta_T Team_i + \beta_F Fund_i + \beta_I Inv_i + \varepsilon_i \\
Exit_i &= c_4 + \beta_L Level_i + \beta_T Team_i + \beta_e Level_i Team_i + \beta_F Fund_i + \beta_I Inv_i + \varepsilon_i
\end{aligned} \tag{1}
$$

where i refers to equity fund i, c_1, c_2, c_3, and c_4 are constant intercept terms, $Level_i Team_i$ is interaction term, and ε_i is the error term. If coefficients β_L and β_T are significantly positive, it can be concluded that post-investment management can enhance the investment equity funds performance.

4. Result

4.1. Descriptive statistics

Table 4 presents the descriptive statistical analysis of the variables. The equity investment fund size $Fund$ exhibits a wide range, spanning from 30 million yuan to 11.896 billion yuan. The number of firms invested by the equity investment funds Inv varies from 9 to 42. The average exit rate of the research sample $Exit$ is 0.366.

Table 4 Variable descriptive statistical analysis.

Variable	Mean	Median	Std	Max	Min	N
$Level$	2.194	2	0.873	3	1	31
$Team$	2.194	2	1.108	4	1	31
$Fund$	19.962	10	29.903	118.96	0.3	31
Inv	19.903	17	9.152	42	9	31
$Exit$	0.366	0.343	0.221	0.737	0.028	31
IPO	0.207	0.174	0.156	0.6	0	31

4.2. Correlation

Table 5 shows the Pearson correlation coefficients of the variables. First, the correlation coefficient between $Level$ and $Team$ is 0.684, indicating that as the number of post-investment managers increases, employees perceive a higher importance placed on post-investment management by their institution. Both variables can serve as proxy variables to measure the importance of post-investment management by investment institutions. Second, both $Level$ and $Team$ exhibit significant positive correlations with $Exit$ and IPO. This preliminary observation suggests that post-investment management can enhance the exit performance of investment funds. Third, $Exit$ demonstrates a strong correlation with IPO, which is attributable to IPOs being one of the exit mechanisms for equity investment funds.

Table 5 Correlations between variables.

Variable	$Level$	$Team$	$Fund$	Inv	$Exit$	IPO
$Level$	1					
$Team$	0.684***	1				
$Fund$	-0.068	-0.129	1			
Inv	-0.010	-0.054	-0.241	1		
$Exit$	0.578***	0.538***	0.013	-0.293	1	
IPO	0.472***	0.536***	-0.146	-0.179	0.824***	1

$^{***}\ p < 0.01, ^{**}\ p < 0.05, ^{*}\ p < 0.1.$

4.3. Estimating the model and illustrating the result

Table 6 presents the estimation results with $Exit$ as the dependent variable. The key findings are as follows.

First, the coefficient β_L of the level of importance attached to post-investment management $Level$ is significantly positive. Specifically, in estimations (1) and (4), β_L is positive at a 1% significance level, while in estimation (3), it is positive at a 10% significance level.

Second, the coefficient β_L of the number of post-investment personnel $Team$ is positively significant at a 1% significance level in estimations (2) and (4). This indicates that investment institutions' emphasis on post-investment management (measured by employee perceptions and the number of post-investment managers) improves the exit performance of equity funds.

Third, the coefficient β_F for the equity fund size $Fund$ is not statistically significant, indicating no significant statistical relationship between fund size and exit rates.

Fourth, the coefficient β_{Inv} of the number of invested firms Inv is significantly negative. In estimation (3), it is significant at a 10% level, and in estimation (4), it is significant at a 1% level. This suggests that as the number of invested firms increases, investment institutions may struggle to effectively track all of them due to the significant effort required for post-investment management.

Notably, in estimation (3), the coefficients of $Level$ and $Team$ change from being significant in estimations (1) and (2) to becoming insignificant at a 1% significance level. This could be attributed to a masking effect (Spencer, 1989) since Level and Team are highly corelated, where the coefficients of two independent variables become insignificant simultaneously in a multiple regression model. Therefore, in estimation (4), the inclusion of the interaction term $Level * Team$ shows a negative coefficient at a 1% significance level. This indicates that the exit performance of equity investment funds increases with the level of importance placed on post-investment management by investment institutions. However, this improvement is not indefinite, as the exit rate starts to decline after reaching a certain point. The findings demonstrate an inverted U-shaped relationship between the level of importance attached to post-investment management and the exit rate of equity investment funds.

Overall, the results suggest that post-investment management plays a crucial role in enhancing the performance of investment institutions, as indicated by exit rates. This is primarily attributed to the allocation of a greater number of post-investment personnel, enabling institutions to provide value-added and supervisory services, effectively monitor risks from competitors, customers, and the supply chain, and facilitate strategic planning, introduction of additional investors, and increased financing for the invested firms. Consequently, the firms experience improved growth opportunities, enhanced operational capabilities, higher returns, and smoother exits. However, the impact of post-investment management on the exit performance of equity investment funds is limited and follows an inverted U-shaped relationship. This implies that excessive resource allocation to post-investment management, such as excessive involvement in operational management, may yield diminishing returns. Therefore, it is beneficial for equity investment institutions to make a balance in their post-investment management practices.

Table 6 regression result with $Exit$ as the dependent variable.

Variables	(1) $Exit$	(2) $Exit$	(3) $Exit$	(4) $Exit$
$Level$	0.145***		0.103*	0.317***
	(0.037)		(0.051)	(0.090)
$Team$		0.105***	0.049	0.405***
		(0.031)	(0.040)	(0.134)

$Level * Team$				-0.135**
				(0.049)
$Fund$	0.0001	0.0001	0.00004	0.0002
	(0.001)	(0.001)	(0.001)	(0.001)
Inv	-0.007*	-0.006	-0.007*	-0.008**
	(0.004)	(0.004)	(0.004)	(0.003)
c	0.190	0.258**	0.163	-0.334
	(0.122)	(0.120)	(0.123)	(0.211)
Obs.	31	31	31	31
Adj R-squared	0.352	0.289	0.363	0.493

Standard errors in parentheses, $*** \ p < 0.01, ** \ p < 0.05, * \ p < 0.1$.

5. Robustness test

The exit strategies for private equity investments commonly include IPO, acquisition, and transfer. In model (1), $Exit$ includes all these three exit strategies. In general, IPO exit is regarded as the most successful and profitable. Therefore, this article uses the percentage of firms that exited through IPO as a proxy variable to assess the performance of investment funds and conducts a robustness test.

The result in Table 7 confirms the findings in Table 6. First, when using IPO as a performance indicator for investment funds, the coefficients for $Level$ and $Team$ remain significantly positive at a 1% level of significance. Second, the interaction term $Level * Team$ has a significant negative coefficient at a 5% level of significance, indicating an inverse U-shaped relationship between the importance of post-investment management and the IPO exit rate. Third, the coefficients for $Level$ and $Team$ are lower compared to Table 6. It may be due to the limited number of successful IPO firms.

Table 7 regression result with IPO as the dependent variable.

Variables	(5) IPO	(6) IPO	(7) IPO	(8) IPO
$Level$	0.082***		0.038	0.197***
	(0.029)		(0.039)	(0.070)
$Team$		0.072***	0.051	0.316***
		(0.023)	(0.031)	(0.104)
$Level * Team$				-0.101**

				(0.038)
$Fund$	-0.001	-0.001	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Inv	-0.004	-0.003	-0.003	-0.004
	(0.003)	(0.003)	(0.003)	(0.003)
c	0.117	0.124	0.089	-0.281*
	(0.096)	(0.087)	(0.095)	(0.163)
Obs.	31	31	31	31
Adj R-squared	0.200	0.249	0.248	0.390

Standard errors in parentheses,*** $p < 0.01$,** $p < 0.05$,* $p < 0.1$.

6. Conclusion

This article examines the impact of investment funds' emphasis on post-investment management on their performance by analyzing the 31 equity investment funds. The findings indicate that both the level of importance of post-investment management as evaluated by investment institution employees and the number of post-investment management staff significantly contribute to enhancing the performance of equity investment funds. Increasing the emphasis on post-investment management leads to better exit rates, thus improving the performance of investment funds. However, the effect of post-investment management on the exit level of equity investment funds is limited and shows an inverted U-shaped relationship. Excessive emphasis on post-investment management can lower the exit rates of investment funds. The robustness analysis using the IPO percentage of invested firms as a proxy variable to measure investment firm performance confirms the result.

The findings of this article demonstrate that post-investment management activities have the potential to enhance the investment performance of private equity funds, as indicated by improved exit rates. The empirical analysis reveals an inverted U-shaped relationship between post-investment management and investment funds performance. Specifically, excessive post-investment management efforts may impede investment performance, while a moderate level of post-investment management can yield positive results.

These findings hold practical implications for both business operators and investment firms. During their growth phase, businesses may consider partnering with private equity investment firms to benefit from their supervision, value-added services, and support in areas, e.g. business development, strategic planning, marketing, and risk mitigation. Investment firms need to prioritize post-investment management activities and avoid solely focusing on increasing investment quantity or fundraising scale. Effective post-investment management plays a crucial role in improving the performance of invested firms and ultimately leads to higher investment returns.

However, it is beneficial for investment firms to strike a balance between post-investment management and the screening and selection of high-quality investment opportunities. Excessive post-investment management efforts can potentially decrease exit rates. Thus, it is important for investment firms to adopt a holistic approach that integrates efficient post-investment management practices with the identification and cultivation of promising investment prospects.

Future research can expand the sample size of investment funds to strengthen the generalizability of the findings and conduct more comprehensive analyses. Furthermore, future research may explore the practical implementation of post-investment management by investment firms and optimize the design of post-investment management strategies. These areas of investigation will contribute to a deeper understanding of post-investment management practices and their impact on investment performance.

References

Barry, C. B., Muscarella, C. J., Peavy Iii, J. W., & Vetsuypens, M. R. (1990). The Role of Venture Capital in the Creation of Public Companies: Evidence from the Going-Public Process. *Journal of Financial Economics*, *27*(2), 447-471.

Chemmanur, T. J., Krishnan, K., & Nandy, D. K. (2011). How Does Venture Capital Financing Improve Efficiency in Private Firms? A Look beneath the Surface. *The Review of Financial Studies*, *24*(12), 4037-4090.

Chen, Y. (2022). Research on the Impact of Private Equity Investment on the Growth of Innovative Smes. 2022 4th International Conference on Economic Management and Cultural Industry (ICEMCI 2022),

Croce, A., Martí, J., & Murtinu, S. (2013). The Impact of Venture Capital on the Productivity Growth of European Entrepreneurial Firms:'Screening'or 'Value Added'effect? *Journal of Business Venturing*, *28*(4), 489-510.

Dutta, S., & Folta, T. B. (2016). A Comparison of the Effect of Angels and Venture Capitalists on Innovation and Value Creation. *Journal of Business Venturing*, *31*(1), 39-54.

Gompers, P. A. (1996). Grandstanding in the Venture Capital Industry. *Journal of Financial Economics*, *42*(1), 133-156.

Gurău, C., & Dana, L.-P. (2020). Financing Paths, Firms' Governance and Corporate Entrepreneurship: Accessing and Applying Operant and Operand Resources in Biotechnology Firms. *Technological Forecasting and Social Change*, *153*, 119935.

Han, Q., Guizhou, W., & Shouyang, W. (2020). Can Venture Capital Screen and Foster Entrepreneurial Firms? Empirical Evidence from Fuzzy Regression Discontinuity. *Systems Engineering - Theory & Practice*, *40*(12), 3059-3079.

Hassan, A., & Leece, D. (2008). The Influence of Venture Capitalists' Source of Finance on Their Post-Investment Behavior in Investee Companies. *The Journal of Private Equity*, 69-84.

Hochberg, Y. V. (2012). Venture Capital and Corporate Governance in the Newly Public Firm. *Review of Finance*, *16*(2), 429-480.

Mason, C. M., & Harrison, R. T. (1996). Informal Venture Capital: A Study of the Investment Process, the Post-Investment Experience and Investment Performance. *Entrepreneurship & Regional Development*, *8*(2), 105-126.

Metrick, A., & Yasuda, A. (2011). Venture Capital and Other Private Equity: A Survey. *European Financial Management*, *17*(4), 619-654.

Spencer, M. B. (1989). Regression Models for the Estimation of Orcadian Rhythms in the Presence of Effects Due to Masking. *Chronobiology International*, *6*(1), 77-91.