



Key Determinants of Corporate Investment Efficiency

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ABSTRACT

The efficient allocation of capital to value-enhancing investment is a crucial concern of accounting finance practices. Over the past decades, a growing body of research has studied the factors of investment efficiency, yet a comprehensive synthesis remains limited. This study employ the Kitchenham systematic literature review methodology and citation analysis. We analyze 65 peer-reviewed articles from Scopus database addressed investment efficiency. Our findings reveal eight major determinants varies depending on the methodology and contextual setting employed: financial reporting and accounting quality, corporate governance and CSR, government intervention and policy, ownership structure, industry and sector-specific, international and emerging markets, and methodological approaches and theoretical advancements. It contributes more comprehensive understanding of the mechanism driving investment efficiency and optimizing capital allocation.

INTRODUCTION

The review delves into the extensive empirical literature that examines the impact of financial reporting and disclosure on corporate investment decisions. As proposed in idealized models, the fundamental question is whether financial reporting improves capital allocation efficiency by diverting funds to projects with positive net present values (NPVs) and discouraging investment in those with negative NPVs Modigliani & Miller (1958). Real-world imperfections, mainly information, frequently impede this optimal outcome. In the decades, a significant and growing corpus of research has enhanced our comprehension of how financial reporting influences investment decisions, revealing both anticipated and unforeseen consequences. We intend to synthesize this diverse empirical research within a coherent framework and to identify potential areas for future research.

Roychowdhury et al. (2019) reviewed the literature and documented that financial reporting can also improve investment efficiency. Improving the quality of financial reporting has a positive and significant relationship with investment efficiency (Ardianto et al., 2020). The literature on the positive impact of financial reporting on investment efficiency has been growing apart from the literature showing how financial reporting can cause myopia and reduce investment efficiency, for example, when companies reduce their research and development activities to achieve financial reporting targets. As a result, although there is a strong relationship between the findings, the literature still needs to present an integrated understanding of the consequences of financial reporting that includes both positive and negative impacts on investment decisions and thus requires future research.

Accounting systems significantly impact investment decisions, with attributes classified into two categories. The initial category concentrates on the quantity and accuracy of information disclosed, including earnings quality indicators, accounting policy changes, and voluntary dissemination. The second group focuses on the extent and scope of economic transactions or events, considering factors such as frequency of financial reporting, measurement of economic transactions, and aggregation methods. These factors influence the investment environment, offering investors important information for making decisions (Kanodia & Sapra, 2016).

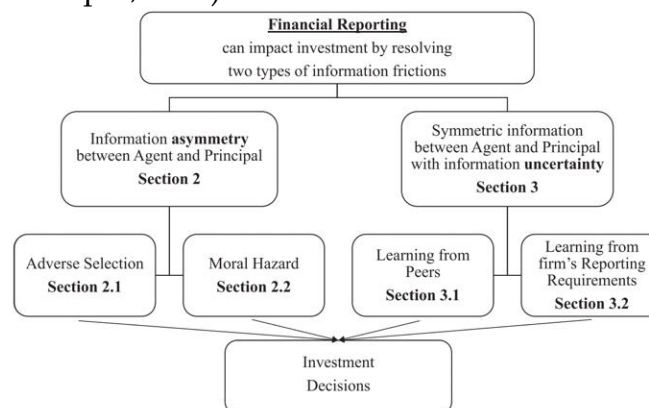


Figure 1

Framework for the influence of financial reporting on investment decisions

Source: (Roychowdhury et al., 2019)

Based on the framework in Figure 1, how financial reporting can influence decision-making is explained through 2 categories. The first category examines the function of financial reporting in contexts where agency conflicts arise due to information asymmetry. This explains that accounting information can reduce information asymmetry, increasing investment efficiency or encouraging companies to make potentially inefficient investments to meet financial reporting standards. The second category focuses on studying the impacts of uncertainty regarding investment opportunities. Whether reported by a company or disclosed by similar companies, accounting information influences managers' information, which can change their investment choices (Roychowdhury et al., 2019).

Research on financial reporting underscores its dual effect on investment efficiency; high-quality financial reporting improves capital allocation by diminishing information asymmetry and directing investments toward projects with favorable net present values (NPVs), while simultaneously fostering short-term myopia, prompting firms to reduce R&D expenditures to achieve financial objectives. Although research indicates a robust positive correlation between the quality of financial reporting and investment efficiency (Roychowdhury et al., 2019; Ardianto et al., 2020), discrepancies persist owing to differences in disclosure procedures, agency conflicts, and managerial decision-making amid uncertainty. The imperative of a literature review is to integrate these findings to address theoretical discrepancies, enhance reporting standards for investment efficiency, and inform future research aimed at alleviating inefficiencies stemming from short-term financial reporting pressures.

THEORETICAL REVIEW

Agency Theory

This study reviews various research about the determinant factors on investment decisions amid agency frictions introduced by Jensen & Meckling (1976). The prevalent theme in the research examined in this section is that asymmetry of information among different stakeholders in the organization leads to investment distortions compared to the optimal scenario. High-quality financial information can increase investment efficiency by mitigating information asymmetry (Biddle et al., 2009) and obtaining private information and interpretation by external parties such as institutional investors (Cao et al., 2020), foreign investors (R. Chen et al., 2017), and financial analysts (T. Chen et al., 2017).

In the Industrial Revolution 4.0, the internet played an important role in accelerating business information dissemination to investors, known as corporate disclosure. Business media can distribute information (Drake et al., 2014). Businesses often use the media to disseminate information related to company disclosure (Bushee et al., 2010). However, its reach is still limited

because the media can only disseminate information if there are many readers (Miller, 2006). When companies disclose information through these channels, they face the problem of cost-effective information. If this information asymmetry occurs, investors can experience losses if they make the wrong investment decision. Therefore, investors still seem to experience information inequality, also known as information asymmetry.

In information asymmetry, information intermediaries or media play an important role, whose relationship has still not been researched. Gao et al. (2021) found that media coverage reduces under-investment, especially in companies with higher information asymmetry and weaker corporate governance, while encouraging over-investment due to CEO overconfidence caused by the media. As an essential information intermediary, the media provides important information about a company's future prospects and investment conditions to investors and the general public (Gao et al., 2021).

Most of the literature we examine can be classified as relying on one or more of the four channels depicted in Figure. 1. Nevertheless, our examination also identifies eight streams of literature that have garnered significant attention in the key influential factor of investment efficiency, including accounting, the most mentioned by researchers relevant to investment efficiency. In particular, investment decisions can be influenced by financial reporting and accounting quality when managers or stakeholders possess behavioral biases and when firms are connected through networks established by the use of common agents. The findings demonstrate that corporate governance and corporate social responsibility can enhance investment efficiency. The ownership structure, government intervention and policy, industry and specific sector, and international and emerging markets positions can also affect investment efficiency.

METHODOLOGY

The literature review is conducted systematically, following the procedures outlined Kitchenham & Brereton (2013) because it used the software tool Vosviewer to analyze data. This approach involves a comprehensive examination of existing literature to uncover and evaluate relevant information from prior research, often referred to as a research inquiry. The systematic review process is structured into three distinct stages: Planning, where the research question and search strategy are developed; Conducting, where the literature is systematically searched and reviewed; and Reporting, where the findings are synthesized and presented. Figure 2 shows the process consists of three phases. The first stage involves the crucial task of selecting the research question, which will be the primary focus of this research's discussion. The next step is to choose relevant articles to address the questions identified in the research question. The specific steps are as follows.

Planning

During this phase, we endeavored to identify literature pertinent to investment efficiency determinants factors. The investigation was conducted using keywords and involved examining numerous research records.

Conducting

Several journals have been obtained from search results indexed by Scopus, as indicated by the data displayed. We employed the Scopus database to construct a list of articles published in the field of investment efficiency from 2002 until 2023 to conduct a systematic literature review.

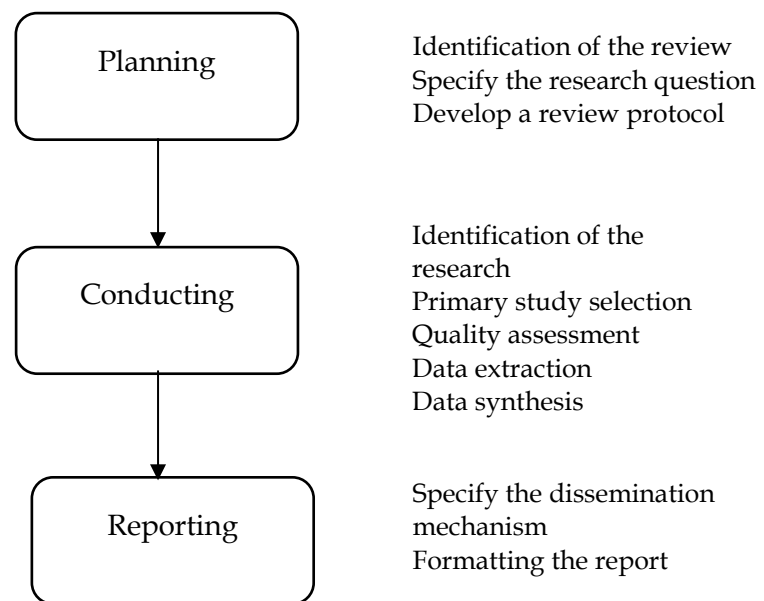


Figure 2. Systematic Literature Review Process (Kitchenham & Brereton, 2013)

Reporting

The final stage of the Systematic Literature Review is reporting. This process involves meticulous examination and analysis of the literature to address the research query that was previously established during the planning phase. We use citation analysis to determine key factors of investment efficiency. The results and discussion section contains the findings of the analysis.

RESULTS

Planning

We aimed to establish a protocol for systematic literature reviews to simplify data extraction and synthesis. It is modified from the systematic literature review method used by Kitchenham & Brereton (2013). Table 1 illustrates the protocol.

Table 1. Systematic Literature Review Protocol

SLR Protocol	Description
Research Question	RQ What are the key determinants factor of corporate investment efficiency?
Source Searched	Scopus
Search Terms	“Investment” AND “Efficiency” with the selected “investment efficiency” keywords
Inclusion	The literature contains discussion about the investment efficiency and the determinants factors, theories and studies. The literature must be categorized in subject Business, Management, and Accounting based on Scopus database subject area.
Exclusion	Discussed in non-journals type This journal does not take journals outside the Scopus index
Quality Assesment Criteria	Clarify of research objectives Contains literature review, background, and research context Show relevant conclusions
Data Extraction Synergy	The research was mapped by researchers according to the variables and methods employed. In addition, each variable will be evaluated during the data collection and research process.
Data Synthesis Strategy	The data synthesis is conducted using a data-driven approach that is predicated on the outcomes of the paper extraction. In order to address the research question, this data-driven approach generates a comparison list for each paper.

Conducting

We scrapped the Scopus database and found 6106 journal articles included. It underscores the necessity of identifying and defining pertinent terms before conducting a systematic literature review (Bouzon et al., 2014). The keywords "investment" AND "efficiency" were employed in this study to ascertain the general trends and potential for investment efficiency-related research, including selecting "investment efficiency" keywords in 330 journals. Furthermore, the search was conducted using these criteria: the popular factor categorized shown in the relationship with investment efficiency is 65 journal articles.

After collecting the journals, researchers tried extracting data to gather reliable and consistent data. Identification, Author Name, Publication Year, Source, Reference, Data Collection Methodology, Data Analysis, and Concept are the literary criteria used in this data extraction. The selected research is mapped based on the sources obtained and presented in Fig. 3.

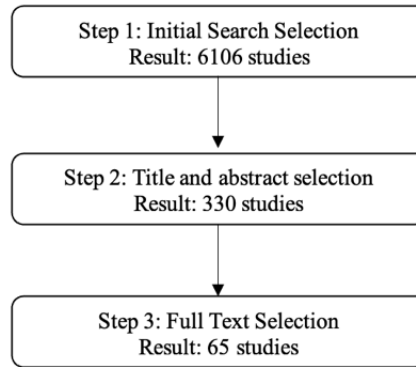


Figure 3. Selected articles based on topics related to investment efficiency

Reporting

The final stage of the Systematic Literature Review is reporting. This process involves meticulous examination and analysis of the literature to address the research query that was previously established during the planning phase based on the research keyword. The Results and Discussion section contains the findings of the analysis.

RQ What are the key determinants of investment efficiency

The topic-related investment efficiency chart in Fig. 3 illustrates the distribution of research topics related to investment efficiency, highlighting key areas of focus. Financial reporting and accounting quality emerge as the most frequently studied topic, underscoring its critical role in shaping investment efficiency. Industry and sector-specific studies, corporate governance, and government intervention and policy are also prominent, reflecting the importance of both regulatory and firm-level factors in investment decision-making. Other topics, including corporate social responsibility (CSR), ownership structure, methodological and theoretical studies, and international and emerging markets, suggest these areas are relatively less explored but still relevant. Overall, the findings indicate that while financial reporting quality dominates the discussion, investment efficiency is a multifaceted issue influenced by governance, policy, industry dynamics, and broader economic contexts.

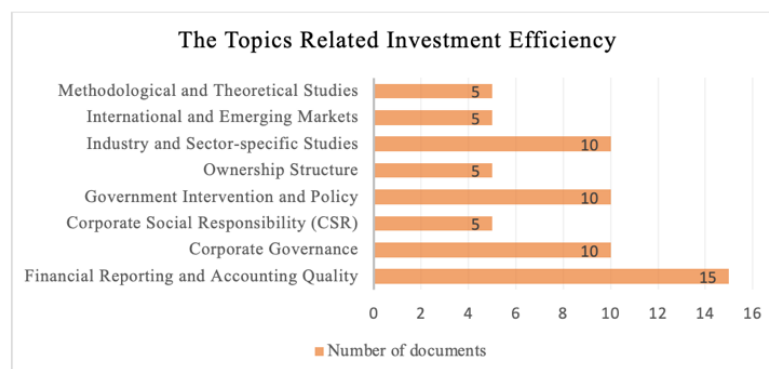


Figure 4. The Topic Related Investment Efficiency

Financial Reporting and Accounting Quality

The financial reporting and accounting quality articles explore their influence on investment efficacy in various market environments. They examine the impact of financial reporting quality on firms' efficiency and investment decisions, particularly emphasizing sectors with private ownership and emerging markets. Research explores the relationship between investment outcomes, financial reporting quality, and audit quality, highlighting the impact of these factors on firm performance and decision-making processes. Furthermore, research investigates the influence of family ownership on financial reporting practices and its consequent effect on investment efficiency. Additionally, litigation risk is examined as a factor in the quality of accounting and its potential impact on investment decisions. These studies collectively contribute to understanding the interplay between financial reporting standards, accounting practices, and investment efficacy in various economic contexts.

Table 2. The articles related to financial reporting and accounting quality based on citation

Year	Authors	Journal	Citation
2011	Chen F.; Hope O.-K.; Li Q.; Wang X.	Accounting Review	555
2017	Barth M.E.; Cahan S.F.; Chen L.; Venter E.R.	Accounting, Organizations and Society	308
2016	Ben-Nasr H.; Alshwer A.A.	Journal of Corporate Finance	104
2020	Cao Z.; Rees W.	Journal of Corporate Finance	92
2017	Chen T.; Xie L.; Zhang Y.	Journal of Corporate Finance	91
2009	Lu T.; Sapra H.	Accounting Review	85
2020	Ghaly M.; Dang V.A.; Stathopoulos K.	Journal of Corporate Finance	83
2022	Ellili N.O.D.	Corporate Governance (Bingley)	58
2014	Lai S.-M.; Liu C.-L.; Wang T.	Asia-Pacific Journal of Accounting and Economics	34
2019	Shahzad F.; Rehman I.U.; Hanif W.; Asim G.A.; Baig M.H.	International Journal of Accounting and Information Management	28
2013	Chung H.H.; Wynn J.P.; Yi H.	Advances in Accounting	22
2018	Majeed M.A.; Zhang X.; Umar M.	Journal of Asia Business Studies	26
2023	Assad N.; Jaafar A.; Zervopoulos P.D.	Journal of Financial Reporting and Accounting	3
2021	Alhadi A.; Habib A.; Taylor G.; Hasan M.; Al-Yahyaee K.	Meditari Accountancy Research	3

2021	Hyejeong S.; Seun-Young P.	Korean Accounting Review	0
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The table delineates significant trends in the citation impact of research pertaining to financial reporting and investment efficiency. Articles published in prestigious journals, such as the Accounting Review and the Journal of Corporate Finance, typically garner the most citations, with Chen et al. (2011) at the forefront with 555 citations, emphasizing that enhancing financial reporting quality (FRQ) in private firms in emerging markets can improve investment efficiency, provided that institutional deficiencies are rectified, and financial practices are aligned with market requirements and regulatory standards. This is followed by Barth et al. (2017), which has 308 citations, asserting that the role of integrated reporting bolsters transparency and information for external stakeholders while significantly enhancing internal decision-making processes. Earlier studies typically garner more citations, but newer works, such as Assad et al. (2023) and Alhadi et al. (2021), have not yet made a substantial influence.

The study highlights improving Financial Reporting Quality (FRQ) in private firms within emerging markets can enhance investment efficiency. Still, this improvement is contingent on addressing institutional weaknesses and aligning financial practices with market demands and regulatory frameworks (F. Chen et al., 2011). Hence, integrated reporting enhances transparency and information for external stakeholders and significantly improves firms' internal decision-making processes (Barth et al., 2017).

Corporate Governance

Research on corporate governance and investment efficiency examines how factors such as board independence, diversity, CEO characteristics, audit committee effectiveness, and shareholder activism influence firms' investment decisions. These studies highlight that effective governance structures, including independent boards, diverse perspectives, capable CEOs, and strong audit oversight, are crucial for enhancing investment efficiency by improving oversight, risk management, and strategic decision-making processes within companies.

Table 3. The articles related to corporate governance based on citation

Year	Authors	Journal	Citation
2015	Liu Y.; Miletkov M.K.; Wei Z.; Yang T.	Journal of Corporate Finance	320
2017	Habib A.; Hasan M.M.	Research in International Business and Finance	82
2020	Rajkovic T.	Journal of Corporate Finance	69
2021	Liu L.; Tian G.G.	Accounting and Finance	67
2020	Ullah I.; Zeb A.; Khan M.A.; Xiao W.	Corporate Governance (Bingley)	47
2015	Xie J.	Emerging Markets Review	46

2017	Chen N.; Sung H.-C.; Yang J.	Pacific Accounting Review	43
2020	Mirza S.S.; Majeed M.A.; Ahsan T.	Eurasian Business Review	35
2018	Lai S.-M.; Liu C.-L.	Asia-Pacific Journal of Accounting and Economics	35
2023	Huang B.; Yang E.; Zhang Y.	Corporate Governance: An International Review	5

Table 3 highlights the most cited articles on corporate governance, showing that the 2015 study by Liu Y., Miletkov M.K., Wei Z., and Yang T. in the *Journal of Corporate Finance* is the most influential between 2015 and 2021, indicating that research on corporate governance during this period had significant academic relevance with 320 citations. The research employed on Chinese companies shows that board independence markedly improves investment efficiency by reducing insider self-dealing and enhancing overall operational effectiveness. Independent directors have been demonstrated to be crucial in aligning managerial decisions with shareholder interests, therefore enhancing the firm's investment decisions and operational efficiency (Y. Liu et al., 2015). The 2023 study by Huang B., Yang E., and Zhang Y. in *Corporate Governance: An International Review* has only five citations, likely due to its recent publication. They suggest that corporate governance remains an evolving field, with certain studies exerting substantial influence over time. The surname homogeneity improves communication and decision-making among board members, reducing agency costs and information asymmetry. It highlights the positive impact of cohesive board structures on corporate governance and investment decisions in SOEs (B. Huang et al., 2023).

Corporate Social Responsibility

Corporate Social Responsibility efforts augment investment efficiency through enhanced transparency, the promotion of innovation, and the fortification of business value. CSR transparency mitigates information asymmetry, facilitating informed investment decisions, whereas CSR-driven innovation enhances operational efficiency and competitiveness. A robust CSR framework attracts conscientious investors and reduces capital costs, aligning enterprises with society's expectations and fostering sustainable growth.

Table 4. The articles related to corporate social responsibility based on citation

Year	Authors	Journal	Citation
2018	Benlemlih M.; Bitar M.	Journal of Business Ethics	318
2019	Cook K.A.; Romi A.M.; Sánchez D.; Sánchez J.M.	Journal of Business Finance and Accounting	132
2017	Zhong M.; Gao L.	Review of Accounting and Finance	58
2021	Liu L.; Tian G.G.	Accounting and Finance	67
2021	Gao Z.; Li L.; Lu L.Y.	Journal of Business Ethics	28
2023	Lin Y.; Lu Z.; Wang Y.	Research in International Business and Finance	13

2022	Houcine A.; Zitouni M.; Srairi S.	EuroMed Journal of Business	13
2020	Lee M.-T.	DLSU Business and Economics Review	5
2023	Poursoleyman E.; Joudi S.; Mansourfar G.; Homayoun S.	Journal of Economic and Administrative Sciences	2
2023	Zhang Y.; Michael M.	Corporate Governance (Bingley)	2

In the Journal of Business Ethics, the popular article with 318 citations Benlemlih & Bitar (2018) shows that direct interaction with primary stakeholders, such as employees and customers, enhances this effect more significantly than activities involving secondary stakeholders. The positive influence of CSR on investment efficiency during economic recessions underscores its strategic importance in business operations. CSR and ethical financial practices are relevant (Cook et al., 2019), and they were published in the Journal of Business Finance and Accounting with 132 citations. It argues CSR improves investment efficiency by decreasing overinvestment in projects with negative net present value and underinvestment in attractive possibilities. Firms' resource allocation, financial performance, and value improve. Recent studies in the Journal of Business Ethics, Accounting and Finance, and Review of Accounting and Finance show that CSR and financial ethics research is interdisciplinary. This implies that while foundational studies shape the discipline, emerging research is still making an impact.

Government Intervention and Policy

These topics collectively address how government interventions can either facilitate or hinder investment efficiency, impacting economic development and corporate performance in various sectors and regions. Understanding these dynamics is crucial for policymakers, investors, and businesses aiming to optimize investment decisions and outcomes.

Table 5. The articles related to government intervention and policy are based on citation.

Year	Authors	Journal	Citation
2011	Chen S.; Sun Z.; Tang S.; Wu D.	Journal of Corporate Finance	741
2017	Chen R.; El Ghoul S.; Guedhami O.; Wang H.	Journal of Corporate Finance	224
2019	Hu J.; Jiang H.; Holmes M.	Emerging Markets Review	67
2018	Du J.; Li W.; Lin B.; Wang Y.	China Journal of Accounting Research	29
2020	Li X.; Chan K.C.; Ma H.	Asia-Pacific Journal of Accounting and Economics	18

2023	Xie L.; Zuo S.; Xie Z.	Research in International Business and Finance	7
2017	Nguyen N.N.H.; Truong T.P.	Accounting Research Journal	6
2021	Chen S.; Gao Q.; Peng Q.; Yang H.	Emerging Markets Review	5
2024	Luo W.; Yu Y.; Deng M.	Research in International Business and Finance	3
2024	Bai Y.; Wu M.	International Journal of Emerging Markets	2

From this topic-related article, Chen et al.'s article from the year 2011 in the Journal of Corporate Finance is the most popular, with 741 citations. They underscore how governmental influence and executive political ties can distort investment behavior, reducing overall investment effectiveness in affected firms (S. Chen et al., 2011). Whereas Chen et al. extend their finding that foreign ownership enhances investment efficiency, likely due to lower information barriers and better governance practices (R. Chen et al., 2017). The recent study of 2024 highlights how government policy changes can effectively enhance investment efficiency, particularly benefiting smaller and non-state-owned enterprises (Bai & Wu, 2024).

Ownership Structure

The ownership structure profoundly affects investment efficiency in terms of corporate governance. It determines decision-making authority, influencing the prioritization of investment initiatives. Diverse ownership structures match stakeholders' interests with corporate objectives in varying ways, influencing the efficacy of investment execution. The dynamics of governance, encompassing board participation and influence on strategic decisions, fluctuate with ownership mix, hence affecting investment efficiency. Diverse ownership arrangements introduce differing risk tolerances and management strategies, influencing investment outcomes. Comprehending these dynamics is essential for assessing how ownership structure influences investment efficiency and corporate success.

Table 6. The articles related to ownership structure based on the citation

Year	Authors	Journal	Citation
2020	Rajkovic T.	Journal of Corporate Finance	69
2015	Tsao S.-M.; Lin C.-H.; Chen V.Y.S.	Journal of Business Research	52
2017	Chen N.; Sung H.-C.; Yang J.	Pacific Accounting Review	43
2020	Mirza S.S.; Majeed M.A.; Ahsan T.	Eurasian Business Review	35
2021	Hyejeong S.; Seun-Young P.	Korean Accounting Review	0
2023	Farooq K.; Chui C.M.; Azeem M.	Asia-Pacific Journal of Accounting and Economics	1

2024	Liu X.; Si F.; Xie C.; Xie L.	Financial Management	0
2022	Shin S.; Chun H.; Brodmann J.	Korean Accounting Review	0

The most cited article is from the Journal of Corporate Finance with 69 citations studied by Rajkovic. Ownership structure influences investment efficiency notably through leading independent directors on corporate boards. Their presence correlates positively with better investment decisions, particularly benefiting firms with weaker governance and higher financial constraints. Lead directors help mitigate overinvestment or underinvestment tendencies based on cash reserves and financial volatility. Their roles in investment committees and interactions with CEOs further shape investment behavior (Rajkovic, 2020). In contrast, ownership structure challenges in achieving optimal investment outcomes when government intervention influences ownership structure during market crises (X. Liu et al., 2024).

International and Emerging Markets

The most popular article on this topic is by Chen et al. in the 2011 Accounting Review journal, with 555 citations. They highlight in emerging markets, financial reporting quality (FRQ) has a significant role in investment efficiency despite generally lower levels of FRQ compared to developed markets like the U.S. While FRQ tends to be lower due to weaker investor protections and lower demand for public information, the study finds that higher FRQ positively impacts investment efficiency in these markets. This highlights the importance of improving FRQ to support informed investment decisions and enhance economic growth in emerging international markets (S. Chen et al., 2011). IFRS adoption increases the positive impact of a firm's performance compared to its foreign peers on investment decisions and enhances transparency and comparability in financial reporting across international and emerging markets (C. Chen et al., 2013). Also, CSR disclosure enhances capital access and supports sustainable business practices globally (Zhong & Gao, 2017).

Table 7. The articles related to international and emerging markets are based on citation.

Year	Authors	Journal	Citation
2011	Chen F.; Hope O.-K.; Li Q.; Wang X.	Accounting Review	555
2013	Chen C.; Young D.; Zhuang Z.	Accounting Review	105
2017	Zhong M.; Gao L.	Review of Accounting and Finance	58
2018	Majeed M.A.; Zhang X.; Umar M.	Journal of Asia Business Studies	16
2021	Liu Y.; Kim W.; Sung T.	Journal of Corporate Finance	9

Industry and Sector-specific Studies

Industry and sector-specific studies on investment efficiency provide critical insights into how different sectors manage their capital allocations and resource utilization. The most cited article with 50 citations in the Journal of High Technology Management Research studies typically analyzes how technological advancements, regulatory environments, and market dynamics influence firms' investment decisions and outcomes. By focusing on specific industries or sectors, such as high-tech, energy, or finance, researchers can assess the effectiveness of investment strategies in achieving sector-specific goals like innovation, sustainability, or profitability. These insights are valuable for policymakers, investors, and industry leaders seeking to optimize investment efficiency and enhance overall sectoral performance in a competitive global economy (Han et al., 2017).

Table 8. The articles related to Industry and Sector-specific Studies are based on citation.

Year	Authors	Journal	Citation
2017	Han C.; Thomas S.R.; Yang M.; Ieromonachou P.; Zhang H.	Journal of High Technology Management Research	50
2017	Ge W.; Kang T.; Lobo G.J.; Song B.Y.	Asian Review of Accounting	5
2017	Park S.; Kim I.; Kim W.	Journal of Applied Business Research	3
2024	Nuanpradit S.	Journal of Asia Business Studies	0
2020	Garg M.C.; Garg S.	SCMS Journal of Indian Management	0

Methodological and Theoretical Studies

The most popular article by Cheynel highlighted high disclosure frictions lead to overinvestment relative to optimal levels, while low disclosure frictions result in underinvestment. The average cost of capital acts as a proxy for risk-sharing rather than investment efficiency, indicating that the relationship between the cost of capital and ex-ante efficiency may be ambiguous and context-specific. It contributes to understanding how voluntary disclosures influence firms' cost of capital and the broader implications for risk management and investment efficiency in corporate finance (Cheynel, 2013).

Table 9. The articles related to methodological and theoretical studies based on citation

Year	Authors	Journal	Citation
2013	Cheynel E.	Review of Accounting Studies	76
2020	Deng X.; Gao L.; Kim J.-B.	Journal of Corporate Finance	50
2020	Choi J.K.; Hann R.N.; Subasi M.; Zheng Y.	Contemporary Accounting Research	35

2021	Liu Y.; Gan H.; Karim K.	Review of Quantitative Finance and Accounting	9
2023	Chen Z.; Fu S.; Wang K.	Journal of Accounting and Public Policy	0

DISCUSSION

Several researchers have reviewed the literature on investment opportunities. A recent study with the same analytical technique, citation analysis, is C.-Y. Huang et al.(2022). They used cited generated articles from the Social Science Citation Index (SSCI). Hence, this study used the Scopus Database, which is widely known as a large bibliographic database that offers access to numerous academic journals, books, and conference proceedings across diverse scientific subjects, managed by Elsevier. Their study identifies four research trends on investment efficiency: financial reporting quality, board gender diversity, ownership structure, and corporate social responsibility (CSR). We extend the determinants from external factors such as government intervention and policy, market position, and industry. Using another method, NPV analysis, Hu et al., (2022) explained three levels of factors: internal governance or board composition, external corporate governance factors, and external macro-environmental factors.

The previous study works of literature review are focused on specific factors, such as financial reporting (Roychowdhury et al., 2019) regarding investment choices: (i) the presence of information asymmetry that gives rise to agency frictions such as adverse selection and moral hazard costs, and (ii) the presence of uncertainty about growth opportunities. The specific country studied in China highlights factors that may include firms' financing behaviors, stakeholders' behaviors, and monetary policy (Li et al., 2015). There is also a study conducted a comprehensive survey of literature specific on the studies published in well-reputed journals of finance, i.e., The Journal of Finance, The Review of Financial Studies, and The Journal of Financial Economics, results in information asymmetry, cash holdings, policy uncertainty, idiosyncratic risk, governance quality, financing diversification, financial development, managerial network, investor protection, tax policy as prominent factors (Farooq et al., 2022).

CONCLUSIONS AND RECOMMENDATIONS

Our thorough literature study of the Scopus database has discovered and categorized the key determinant elements impacting investment efficiency into eight distinct categories: financial reporting and accounting quality, corporate governance, corporate social responsibility, government intervention and policy, ownership structure, industry, and specific sector studies, international and emerging markets, and methodological approaches and theories. This comprehensive review highlights the multifaceted nature of investment efficiency and the various determinants that can affect it. Our findings underscore the importance of adopting a holistic approach when analyzing investment efficiency, considering the interplay between different factors.

Furthermore, the review identifies gaps in the current literature, suggesting potential avenues for future research. By advancing our understanding of these determinants, researchers and practitioners can better navigate the complexities of capital allocation, ultimately enhancing investment efficiency in diverse contexts.

FURTHER STUDY

This study synthesized current knowledge, offering essential insights into the developing field of investment efficiency research and suggesting new avenues for practitioners. The findings enhance the understanding of the mechanisms influencing investment efficiency and provide implications for policymakers, investors, and corporate decision-makers in optimizing capital allocation. We propose that future studies employ novel analytical tools that can yield a broader range of findings.

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