JASF | Journal of Accounting and Strategic Finance
Vol.8 No.1 June 2025, pp. 94-109.

ISSN 2614-6649 (online)
http://jasf.upnjatim.ac.id

Use Big Theory Clarifies Financial Performance: The Role of Internal Mechanisms Control

Magda Siahaan*
Department of Accounting, Trisakti School of Management, Jakarta, Indonesia.

ORCID: https://orcid.org/0000-0002-0838-3443

*Corresponding author email: mgd.ddm.z@gmail.com

DOI: https://doi.org/10.33005/jasf.v8i1.596

Article Info

Editor: Sari Andayani

Received: January 4, 2025
Revised: May 11, 2025
Accepted: June 15, 2025

Citation APA 7th
Siahaan, M. (2025), Use Big Theory Clarifies Financial Performance: The Role of Internal Mechanisms Control, *JASF: Journal of Accounting and Strategic Finance, 8* (1), pp. 94-109.

ABSTRACT

Purpose: This paper establishes the basic concepts, related work, and core propositions of implementing integrated Governance, Risk Management and Compliance (GRC), internal audit function, and financial performance through the perspective of the underlying grand theory.

Method: This paper uses literature-based analysis. First, it builds a conceptual argument by looking for the big theory, which is the leading theory that serves as the foundation for explaining and analyzing important phenomena in a field of science, which can underlie the integration of GRC, internal audit, and financial performance. It concludes with the predicted relationships of the three that can be seen through their application. Big theory is the leading theory that serves as the foundation for explaining and analyzing important phenomena in a field of science.

Findings: Based on underlying the big theory and the supporting concepts, it is proven that integrated GRC, internal audit, and financial performance are in one corridor of built relationships.

Novelty/Value: Integration of GRC, internal audit, and financial performance in one agency theory-based framework presents integrated relationships and new hypotheses, different from previous studies that separate these variables.

Keywords: Big theory, Financial performance, Integrated GRC, Internal audit.

INTRODUCTION

As the expression, we often hear, "everything is just a game," a relationship can be formed from a game. The game requires a particular strategy. Inseparable in the business world, corporate need strategy games. These strategy games affect decision-making, impacting the organization's accounting system (Wüst and Kuppinger, 2012). Because of the broad impact of strategy games, the organization must create a system or implement new strategies to win the game. Organizations must equip their "weapons" to win, looking for ammunition within the organization by utilizing their resources. Sometimes the ammunition they have cannot function if it is not supported by other ammunition because their "opponent" is powerful both from internal and external attacks. Therefore, in business simulation games, "young" players are more agile in adapting and using new technologies by focusing their attention on the interactions between essential variables in a system (Hale *et al*., 2002; Hernández *et al*., 2019). Games require a relationship between functions or "ammunition" by utilizing new technology to form a new effective strategy. Talking about strategy optimization and decision-making is the basic idea of game theory (Fudenberg and Tirole, 1991; Hanley, 2021; Nash, 1953; Neumann and Morgenstern, 2004). John Von Neumann discovered modern game theory. In 1944, he collaborated theory with Oskar Morgenstern, which stated that the choice of strategy is to maximize one's victory and minimize the opponents' victory (Morgenstern, 1976).

Furthermore, Neumann and Morgenstern stated the importance of information in developing strategies to win the game (Neumann and Morgenstern, 2004). Von Neumann's original work on game theory in 1928 found no less important than the characteristics of the functions that can coalesce in a game (Neumann, 1928). This study uses two functions with different characteristics, namely integrated GRC (Governance, Risk Management and Compliance) and internal audit, wherein the internal organizations' functions can work together to form a strategy to win the competition or game, in this case, organizational financial performance. Why are integrated GRC and internal audits? Yes, because apart from collaborating, indifferent relationship conditions, one of the functions can also be an exogenous variable. In this case, an internal audit can affect whether or not the integrated GRC is practical implementation. However, the two conditions of the relationship are still an expected strategy to achieve financial performance. Therefore, the research question (RQ) of this study is:
RQ: How does the big theory clarify the relationship between integrated GRC mechanisms, internal audit practices, and financial performance?

This relationship aligns with strategic cooperation or inter-organizational relations (Pfeffer and Salancik, 1978; Thompson and McEwen, 1958). Of course, relationship between each function and targets/outcomes has "something" underlying it. This study uses the term "big theory" to describe the whole theory. Both are a driving force for these internal functions to carry out their duties and a foundation between functions and targets/outcomes in building relationships, and the big theory in this study starts from the game theory. Authors need to underline this, not build a new theory described in building theory. This study does not perform a constant comparison of data and theory (Glaser and Strauss, 1967), there is no continuous improvement between theory and practice (Lynham, 2000), and it is also not built from case study research that requires empirical validity (Eisenhardt, 1989).

However, this study is critical because it is not uncommon for researchers to conduct empirical research without having a solid basis in the form of an underlying concept or theory, in other words, theoretical vagueness. This study begins by finding the theoretical basis for each variable, namely integrated GRC, internal audit, and financial performance in carrying out their respective "processes and developments" so that their basic concepts are visible, followed by showing the framework of work relationships, to build a conceptual framework, through literature-based analysis, which can lead to core propositions between the three variables. Finally, at the end of this study, the conclusions and scope of further research are presented after first showing the implementation of each variable built from previous major theories.

CONCEPTUAL METHOD

This study adopts a literature-based conceptual approach, emphasizing the application and integration of existing major theories—referred to here as the "big theory"—as a foundation for examining the interactions among integrated GRC, internal audit, and financial performance. Rather than constructing new theoretical frameworks or engaging in grounded theory processes that rely on constant comparison between data and emergent theory, this research situates itself within an established theoretical paradigm, particularly drawing from game theory as the perspective.

The study does not employ case study methodology or aim for empirical validation through field data. Instead, it critically addresses a recurring challenge in academic research: the tendency to undertake empirical investigation without a clear and coherent theoretical foundation. To address this challenge, the research begins by identifying and explicating the core theoretical concepts that underpin financial performance through the lens of big theory. These conceptual underpinnings serve as the basis for mapping their processes and development, as well as their implementation, based on previous research.

Subsequently, the study constructs a conceptual framework that illustrates the relationship between the integrated GRC, internal audit, and financial performance. This framework is derived from an extensive review and synthesis of the relevant literature, with the final goal of formulating propositions. These propositions provide a theoretically grounded framework for understanding how integrated GRC mechanisms, internal audit practices, and financial performance interact and influence each other.

EXTENSIVE REVIEW ANALYSIS

Big Theory

There is no smoke without fire, and studies cannot be separated from the theoretical framework as a basis, benchmark, and source of hypotheses. Theories emerge because of a resolved phenomenon, meaning that every study should be viewed through a theoretical lens. The big theory is about the origin of a variable or the relationship of several variables to solve problems or phenomena. Therefore, this study examined the function of integrated GRC and internal audits associated with organizational financial performance. It aimed to investigate how the big theory clarifies the possibility of a relationship between the three variables.

The theory underlying a variable could differ when it stands alone, affects, or is influenced by other variables. It is important to establish the origin of the theory by discussing these three variables before getting the applied theory of each variable. Figure 1 illustrates the big theory of the three variables. It shows that game theory applies to various fields of science, which requires a maximum strategy. This is followed by decision-making based on adequate information to reach the game's outcome (Nash, 1953). However, achieving this outcome encounters obstacles, including information asymmetry, due to differences in the interests of the two parties.

Game theory is mainly applied in human or corporate economic behavior (Nash, 2008). Therefore, this information asymmetry could occur between two private or corporate parties. This is consistent with Ronald Coase's explanation of the nature of the firm, which departs from economic theory. It implies a legal relationship between master and servant or employer and employee (Coase, 1937). Agency theory discusses this problem between agents and principals, while this study examined the organization's internal functions. These agency problems arise between subordinates and superordinates or superiors from the perspective of behavior and structure (Jensen and Meckling, 1976). Agency problems occur because of asymmetric information that leads to conflicts of interest between the agent and the principal (Rothschild and Stiglitz, 1976). This information difference results in moral hazard and adverse selection (Akerlof, 1970). Therefore, the principal should create a governance structure to accurately assess and monitor agents' behavior. This ensures that the agent withstands opportunistic behavior and follows the principal's wishes (Eisenhardt, 1989; Fama and Jensen, 1983; Williamson, 1985).

Agents perform their duties to fulfil the interests of principals or companies in line with the stewardship theory (Davis *et al*., 1997). This theory states that when the principal and agent work to achieve the same goal, it positively impacts company performance and maximizes sales growth or profitability. This theory illustrates that the agency problem should not need to occur. Therefore, this is a middle-range theory between agency and applied theories concerning the three study variables.

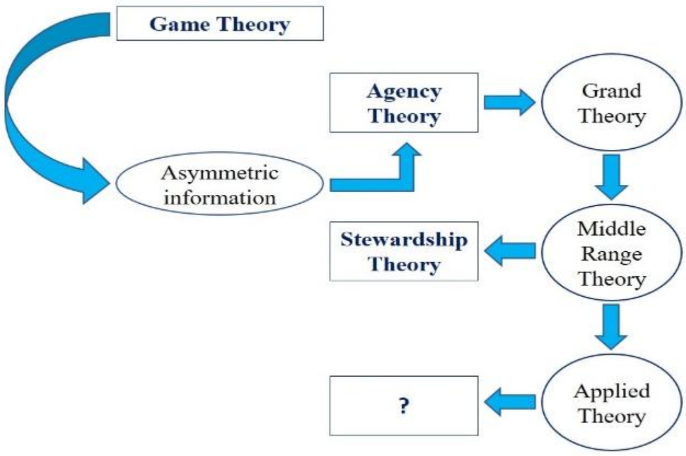

Figure 1. The rationale of big theory
Source: Author's design

Placing agency and stewardship theories as grand and middle-range theories cannot be separated from the critical theoretical elements of "what, how, and why" discussed in these two theories (Reay and Whetten, 2011; Whetten, 1989). This placement can clarify the linkages between financial performance, internal audit, and GRC. The two theories discuss the "what," the relationship between agents and principals, the same organizational structure, and company performance as the outcome. Agency theory uses organizational structure to overcome the agents' opportunistic behavior. In contrast, stewardship theory uses the agents' pro-organizational behavior by motivating them to use and allocate resources effectively and efficiently to achieve organizational goals. After discussing middle-range theory, what applied theory is used for the three variables in this study? The flow of this relationship is shown in Figure 1. Given the many related theories that can be used to demonstrate a relationship, applied theory is critical. This theory is at the micro level and is designed to be directly applied in practice or concrete situations. In contrast to grand theory, which is very general and abstract, applied theory focuses on applying theoretical concepts and principles in specific contexts to solve real problems or explain certain phenomena practically. As for the applied theories in this research, some can be seen in Table 1, such as management theory and institutional theory, which are explained in the related functions.

Integrated GRC

GRC is an integrated system of governance, risk management, and compliance that balances the achievement of organizational goals, overcomes business uncertainty, and optimizes risk (Mitchell, 2007a). This concept departs from the importance of corporate governance in an organization. The assertion conveyed by Ben Fatma and Chouaibi (2021) is that the corporate governance mechanism impacts increasing corporate value; and firm performance. Therefore the hope for this integrated GRC concept is that apart from principled performance (Mitchell, 2007) and management of financial performance (Dittmar *et al*., 2008), it also concerns many of the problems faced by organizations today, such as overcoming acts of corruption (Chuprunov, 2018; Siahaan *et al*., 2023b, 2024), can also function as cybersecurity (SAP, 2016).

Table 1 shows some theories underlying the integrated GRC, starting with the contingency theory (Lawrence and Lorsch, 1967). Organizations always face business uncertainty that requires a strategy whose effectiveness depends on the business environment. In line with this, an organizational systems strategy requires activities to formulate, implement, and rationalize organizational systems to achieve better performance even in a less dynamic environment. Therefore, the contingency theory underlies the integrated GRC variable as an organizational system strategy. Integrated GRC is also founded on management theory (Jones and George, 2016) which explains ideas or general rules for managing an organization or business process.

Table 1. Underlying Big Theory

Governance	Risk Management	Compliance	Integrated GRC	Internal Audit	Financial Performance
Agency Theory - Jensen and Meckling (1976)	Utility Theory - Neumann and Morgenstern (1947)	Compliance Theory - Etzioni (1968)	Contingency Theory - Lawrence and Lorsch (1967)	Attribution Theory - Jones and Davis (1965)	Contingency Theory - Lawrence and Lorsch (1967)
Institutional Theory - Meyer and Rowan (1977)	Agency Theory - Jensen and Meckling (1976)	Agency Theory - Jensen and Meckling (1976)	Agency Theory - Jensen and Meckling (1976)	Contingency Theory - Lawrence and Lorsch (1967)	Agency Theory - Jensen and Meckling (1976)
Resource Dependence Theory - Pfeffer and Salancik (1978)	Prospect Theory - Kahneman and Tversky (1979)	Stewardship Theory - Davis *et al.* (1997)	Stewardship Theory - Davis *et al.* (1997)	Agency Theory - Jensen and Meckling (1976)	Stewardship Theory - Davis *et al.* (1997)
Stakeholders Theory - Freeman (1984)	Stewardship Theory - Davis *et al.* (1997)		Management Theory - Jones and George (2016)	Institutional Theory - Meyer and Rowan (1977)	
Stewardship Theory - Davis *et al.* (1997)				Stewardship Theory - Davis *et al.* (1997)	

Source: Previous studies

The theory explains the management of superordinates or principals in agency and stewardship theories. Superordinates are expected to create a system or implement a strategy for achieving organizational goals. Partially, the integrated GRC, including governance, risk management, and compliance, is based on theories as follows:

Governance. Institutional theory by Meyer and Rowan (1977) defines that organizations should figure out and quickly respond to changes in institutions, expectations, and social pressures. In line with this, the theory of dependent resources (Pfeffer and Salancik, 1978) discusses the organization's behavior controlled by external resource factors. It is an essential principle of strategic and tactical management of the company. Furthermore, stakeholder theory (Freeman, 1984) explains the relationship between stakeholders and the company. A company manages its stakeholders with the strategic posture to produce a harmonious relationship between the two (Ullmann, 1985).

Risk management. The expected utility theory of (VNM) utility theorem in 1947 (Neumann and Morgenstern, 2004) and prospect theory (Kahneman and Tversky, 1979). It is closely related to game theory, where a decision is made to maximize the utility expected by risk management or aversion (Fudenberg and Tirole, 1991; Rabin, 2000). This happens because of the probability of an action or decision resulting in risk.

Compliance. The compliance theory by Etzioni in 1969 (Dodge, 2016) describes the organizational structure or subordinate relationships that must obey their superiors. It relates to complying with regulations, where organizations must manage the risk of possible non-compliance with regulations. Additionally, this theory is associated with fighting crime that affects organizational financial performance.

Internal audit

Internal audit is the third line in the three-line model within the organization (Institute of Internal Auditors, 2020). It is an internal supervisory unit that provides reasonable assurance that internal control has been appropriately implemented and risk management has been managed. Furthermore, an internal audit ensures that lines one and two function effectively and efficiently. Agency theory underlies the demand and supply of audit services because of the asymmetric information between the agent and the principal. Subsequently, internal audit becomes the eyes and ears for the principal in monitoring agents (Michael B. Adams, 1994; Sawyer, 1973). Internal auditors see from various perspectives to provide insight, oversight, and foresight using their knowledge, expertise, and organizational position (Singh *et al*., 2021).

Internal audit is founded on various theories, including contingency theory (Lawrence and Lorsch, 1967), shown in Table 1. This theory explains the role of internal audits in dealing with business uncertainty faced. As part of the organizational structure, an internal audit is expected to ensure the operation of the management control system (Pagliarussi & Leme, 2020; Pfister *et al*., 2023). This is part of the contingency factor in determining organizational strategy. There needs to be alignment between the level of control and strategy to produce high performance (Donaldson, 2001). The audit process and results depend on variables and factors contingent on quality and output. In this case, audits are guaranteed when the team uses appropriate resources for expertise and experience. This is also possible when the auditor is flexible and adapts to process fluctuations.

Institutional theory by Meyer and Rowan (1977) explains how organizations adapt to change concerning accounting practices and society's values. Organizations must be highly committed to achieving the ultimate goal, such as following up on audit results. The follow-up to audit findings could also help achieve internal audit quality. Moreover, the attribution theory by Jones and Davis (1965) or the correspondent inference theory describes the process of internal attribution. This theory underlies internal audit when the agents' behavior differs from their daily habits, indicating irregularities.

Financial performance

The game's outcomes are financial performance (Nash, 1953) and company performance achieved by minimizing costs and increasing efficiency. The company is part of organizational performance, meaning controlling financial resources is important for success. The performance offers information about the achievement of goals and results. An increase in financial performance increases the company's functions and activities. Many factors impact the essential variables used to build financial projections and impact financial statements and future performance (Nimalathasan, 2008).

Financial performance is founded on the contingency theory shown in Table 1 (Lawrence and Lorsch, 1967), which explains organizational performance, including financial performance. Optimizing an organizational structure depends on different factors, such as the nature of work, technology, and market conditions (Drazin and de Ven, 1985). Discussing financial measurements for involvement in budgeting and performance evaluation is a concrete manifestation of implementing corporate ethics to achieve maximum performance (Peng and Emily, 2022; Lau, 2003; Verschoor, 1998).

PREDICTED RELATIONSHIP

A theory analyzes the relationship between facts and according to Kaplan (1965), prediction is generated from an assumption, such as a hypothesis or theory. Theorizing in the social sciences forms a pattern model of something related to other elements that together form a unified system (Kaplan, 1965). Figure 2 illustrates the linkage between financial performance, internal audit and integrated GRC. The theories underlying the relationship between variables produce predictions.

Basic concept

The theory underlying a variable could be different when it stands alone, affects, or influences exogenous or endogenous variables. In this case, the integrated GRC could be influenced by internal audits and affect financial performance. The internal audit function has become essential in various organizations globally. Based on Figure 2, internal audits directly or indirectly affect financial performance. The audit function is task-oriented and could be loosely structured and vary widely, depending on the size of the audited company and the business model. Therefore, auditors must carefully manage their inspections and consider appropriate variables for effective performance.

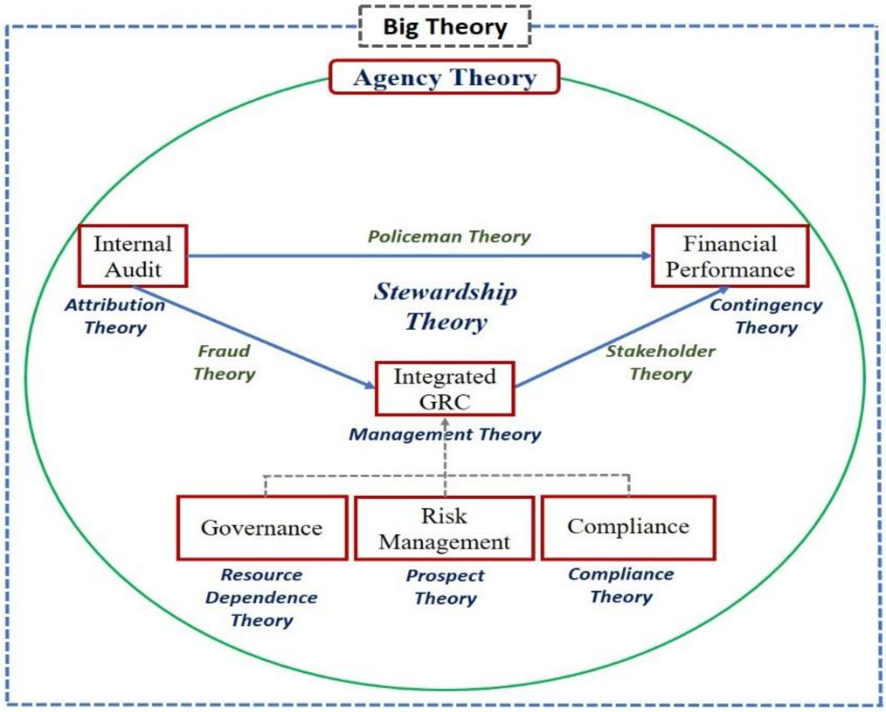

Figure 2. Relationship framework underlying big theory
Source: Author's design

The relationship between internal audit and financial performance is founded on the policeman theory. The theory started from the 1920s to the 1940s and is very appropriate for auditing considering the number of fraud cases (Hayes *et al*., 2014). This theory explains that audits are conducted to verify the truth and fairness of financial statements and detect fraud, which is closely related to finance. Fraudulent actions affect the organization's financial performance. The more trust in employees, the higher the financial losses suffered by the organization (Cressey, 1950). Internal audit helps business units manage risk effectively by identifying financial problems and suggesting improvements that add value or strengthen the organization (Bou-Raad, 2000; Maulidi and Ansell, 2020). This internal audit activity is consistent with the underlying attribution theory (Jones and Davis, 1965) in detecting the possibility of deviant actions that impact financial performance (Siahaan *et al*., 2023a).

The predictable relationship between internal audit and integrated GRC is described by the fraud theory. Cressey (1953) pioneered fraud theory and developed the concept of the fraud hexagon (Vousinas, 2019). This theory helps auditors understand how and why fraud is committed and assists organizations in dealing with the causes of fraud. GRC is a new program supporting internal strategies in addressing fraud. Therefore, management uses it to detect extreme changes in cultural and contextual practices and materialize risks (González, 2016; Mitchell, 2007; Siahaan *et al*., 2023b). The fraud theory supports internal audit responsibilities in implementing integrated GRC in internal organizations and fraud auditing. This is consistent with the attribution theory underlying internal audit (Jones and Davis, 1965) when conducting fraud auditing.

Integrated GRC relates to financial performance and is explained through stakeholder theory (Freeman, 1984). Management considers the impact of company policies and strives to make good and long-term relationships with stakeholders, which have high expectations of organizational performance (Steadman and Green, 1997). Therefore, the management meets these expectations by planning, organizing, directing, and controlling human and other resources to achieve organizational goals effectively and efficiently. Uncertainty could occur about organizational financial performance based on contingency theory (Lawrence and Lorsch, 1967), shown in Figure 2. This uncertainty could be overcome by integrating various GRC aspects strategically oriented on operational compliance, extensive planning, as well as risk and GRC control. Integrated GRC overcomes business uncertainty and achieves financial performance management (Dittmar, 2007), meeting stakeholders' expectations. This supports the creation of principled performance through the company's cross-functional implementation and expansion capabilities. According to the Open Compliance and Ethics Group, GRC is a system of people, processes, and technology enabling organizations to understand and prioritize stakeholder expectations and set business objectives consistent with values and risks (Mitchell, 2007; OCEG, 2007).

Related work

An effective integrated GRC could accurately monitor and assess agents' behavior, following the governance structure expected to overcome agency problems. Agents behave opportunistically by maximizing their interests, even when they should maximize the principal's utility (Ross, 1973). Therefore, deviations often occur in delegating authority from the superordinate to the subordinate. This requires an early warning system that detects deviations made by agents or subordinates to increase organizational performance (Nissen and Marekfia, 2014; Racz and Seufert, 2014), particularly management of financial performance (Dittmar *et al*., 2008). The integrated GRC is an early warning system whose implementation requires supervision from the internal audit. In this case, the internal audit should move firmly into the corporate governance space to audit company operations effectively and provide reliable assurance (Chambers and Odar, 2015; Mertzanis, 2020). The effectiveness of internal functions depends on the relevance of internal audits to save organizational management in detecting and preventing fraud. This would support the achievement of quality financial performance, which is strongly influenced by the financial managers' clean behavior and self-integrity (Xue *et al*., 2022); Hyland and Verreault, 2003).

Core Propositions

A systematic theory is a set of logically interrelated propositions related to the relationship of at least two variables and must be proven empirically (Braithwaite, 1953). The empirical finding explained by this theoretical generalization is derived from a more general hypothesis. It applies to the hypothesis that when A rises, B also increases. Also, it applies to the statistical hypothesis of social characteristics that as B increases with A. The propositions formed from the three variables in Figure 2 are:

(RF) Proposition 1. Increasing the quality of the internal audit improves financial performance

(RF) Proposition 2. The higher the quality of the internal audit function, the more influential the integrated GRC implementation

(RF) Proposition 3. A more effective integrated GRC improves financial performance

Implementation Related to the Big Theory Used

The proposition cannot test the theory because it is built by generalizing previous findings on the variables derived. Several propositions are supported by previous studies on how the theory applies to different scopes. Table 2 shows the empirical study and paradigm on financial performance, internal audit, and integrated GRC variables.

The internal audit function affects the improvement of financial performance explained by Bett, Hazaea *et al*., Irene *et al*., Kwabena, and Mustari. It was built from the agency, stewardship, and policeman theories on the relationship between the two variables, as shown in Figure 2 (Bett, 2014; Hazaea *et al*., 2021; Irene *et al*., 2017; Kwabena, 2017; Mustari *et al*., 2020). Furthermore, the application (Table 2) proves that several theories underlie the relationship beyond the predictions of the legitimacy theory described in Table 1 (Dowling and Pfeffer, 1975). The relationship is inspired by the confidence theory (Limperg, 1932) and resources dependence theory (Pfeffer and Salancik, 1978). Based on the legitimacy theory, the organization operates by responding to the environment. The theory is inspired by confidence to provide comfort for third parties for their organizational contribution to ensure that the financial performance is free from information bias. The resource dependence theory explains that an organization's financial performance is tied to external resources and requires the role of internal audit in the realization process.

Table 2. The Big Theory Relationship from the Previous Study

Relationship			Big Theory	Author
Internal Audit	**Affecting**	**Financial Performance**	Agency Theory, Stewardship Theory, Stakeholder Theory	Bett (2014)
			Policeman theory	Irene *et al*. (2017)
			Agency Theory, Stewardship Theory, Legitimacy Theory	Kwabena (2017)
			Agency Theory, Stewardship Theory, Inspired Confidence Theory	Mustari *et al*. (2020)
			Agency Theory, Resource Dependence Theory	Hazaea *et al*. (2021)
Internal Audit		**Integrated GRC**	Institutional Theory	Elbardan *et al*. (2015)
			Agency Theory, Stewardship Theory, Stakeholder Theory	Narcisa & Elena (2017)
			Fraud Theory	Radford *et al*. (2018)
			Stakeholder Theory	Alazzabi *et al*. (2020)
			Agency Theory, Stakeholder Theory	Sulub *et al*. (2020)
			Institutional Theory	Vadasi *et al*. (2020)
			Agency Theory	Kelly & Dokubo (2021)
Integrated GRC		**Financial Performance**	Agency Theory, Resource Dependence Theory	Isidro & Sobral (2014)
			Agency Theory, Stakeholder Theory	Outa & Waweru, 2016
			Contingency Theory	Alqubaisi (2018)
			Agency Theory, Stewardship Theory	Scafarto & Dimitropoulos (2018)
			Agency Theory, Legitimacy Theory, Signalling Theory	Agyei & Mensah (2019)
			Agency Theory, Signalling Theory	Dissanayake *et al.* (2019)
			Agency Theory, Resource Dependence Theory, Stakeholder Theory	Tanjung (2020)

Source: Previous studies

The agency, stewardship, and fraud theories underlie the relationship between internal audit on integrated GRC, as predicted in Figure 2 (Abdullahi and Mansor, 2018; Alazzabi *et al*., 2020; Elbardan *et al*., 2015; Kelly and Dokubo, 2021; Narcisa and Elena, 2017; Sulub *et al*., 2020; Vadasi *et al*., 2020). Furthermore, the influence of integrated GRC on financial performance is based on the agency, stewardship, and stakeholder theories, as shown in Figure 2 (Agyei-Mensah, 2019; Alqubaisi, 2018; Dissanayake *et al*., 2019; Isidro and Sobral, 2014; Outa and Waweru, 2016; Scafarto and Dimitropoulos, 2018; Tanjung, 2020). Legitimacy theory (Dowling and Pfeffer, 1975) and signalling theory (Spence, 1973) differ from the big theory underlined in Table 1. Signalling theory explains changes in actions by third parties based on signals regarding financial information disclosure. In this case, the quality of the signal could help third parties make an investment decision.

CONCLUSION

This study aimed to be a reference for making sound strategies because of theoretical vagueness in research. It clarified the basic concepts, related work, and core propositions of financial performance, internal audit function, and implementing integrated GRC through the perspective of the big theory. The analysis is important because theory helps build a relationship between the three variables. Moreover, various underlying theories have different contexts for the relationships formed. This study presented integrated GRC, internal audit, and financial performance in built relationships based on the big theory and supporting concepts. The theories started by establishing the basis for forming grand game theory. In this case, information asymmetry could help determine agency and stewardship theories as grand and middle-range. There is an agreement between the determination of two theories in the relationships between variables.

There is a need to review the relationship between the three variables. Internal audit is expected to detect fraud by supporting the integrated GRC. In this case, GRC is one solution to combating fraud and impacting organizational financial performance. The relationship between these three variables is consistent with Halbouni *et al*. (2016). Therefore, these findings could spur future studies on the big theory that underlies the variables and their relationships.

Future research scope

Integrated GRC, internal audit, and financial performance do not use agency or stewardship theories as grand or middle-range theories. On the contrary, they use contingency theory as a grand or middle-range theory. Dubin (1976) stated that all theories are contingency theories because defending the propositions or interaction laws requires assuming the system's initial premises, limits, and states. A complexity could occur regarding the contingent proposition due to the conditional association of two or more independent variables with the dependent outcome hypothesized by the theory (Dubin, 1976). Contingency theory usually applies in achieving effectiveness by focusing on strategies and controls to achieve performance. Therefore, future studies could examine how the big theory explains this finding.

Funding

This research received no external funding.

REFERENCES

Agyei-Mensah, B. K. (2019). The effect of audit committee effectiveness and audit quality on corporate voluntary disclosure quality. *African Journal of Economic and Management Studies, 10*(1), 17–31. https://doi.org/10.1108/AJEMS-04-2018-0102

Akerlof, G. A. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics, 84*(3), 488–500. https://doi.org/10.1017/cbo9780511609381.002

Alazzabi, W. Y. E., Mustafa, H., & Karage, A. I. (2020). Risk management, top management support, internal audit activities and fraud mitigation. *Journal of Financial Crime, July*. https://doi.org/10.1108/jfc-11-2019-0147

Alqubaisi, S. S. (2018). The Role of Governance, Risk and Compliance in Successful Portfolio Project Management, *International Journal of Economics, Finance and Business Management Studies, 4*(2), 71–82.

Ben Fatma, H., & Chouaibi, J. (2021). Corporate governance and firm value: a study on European financial institutions. *International Journal of Productivity and Performance Management*. https://doi.org/10.1108/IJPPM-05-2021-0306.

Bett, C. C. (2014). *The Relationship between Effectiveness of Internal Audit Function and Financial Performance of Companies Listed in Nairobi Securities Exchange*. https://erepository.uonbi.ac.ke/bitstream/handle/11295/75652/Bett_The_Relationship_Between_Effectiveness_of_Internal_Audit_Function_and_Financial_Performance_of_Companies_Listed_in_Nairobi_Securities_Exchange.pdf?sequence=4

Bou-Raad, G. (2000). Internal auditors and a value-added approach: the new business regime. *Managerial Auditing Journal, 15*(4), 182–187. https://doi.org/10.1108/02686900010322461.

Chambers, A.D. & Odar, M. (2015). A new vision for internal audit. *Managerial Auditing Journal, 30*(1), 34–55.

Chun, J. S., Shin, Y., Choi, J. N., & Kim, M. S. (2013). How Does Corporate Ethics Contribute to Firm Financial Performance? The Mediating Role of Collective Organizational Commitment and Organizational Citizenship Behavior. *Journal of Management, 39*(4), 853–877. https://doi.org/10.1177/0149206311419662.

Chuprunov, M. (2018). *Leveraging SAP GRC in the Fight Against Corruption and Fraud*. https://www.google.co.id/books/edition/Leveraging_SAP_GRC_in_the_Fight_Against/NQBNDwAAQBAJ?hl=en&gbpv=1&dq=GRC+and+corruption&printsec=frontcover.

Coase, R. (1937). The nature of the firm. *Economica, 4*(16), 386–405. https://doi.org/https://doi.org/10.2307/2626876.

Cressey, D. R. (1950). The criminal violation of financial trust. *American Sociological Review, 15*(6), 738–743.

Cressey, D. R. (1953). *Other People's Money*. Belmont, California: Wadsworth Publishing Company, Inc.

Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a stewardship theory of management. *Academy of Management Review*, 22(1), 20–47. https://doi.org/10.5465/AMR.1997.9707180258.

Dissanayake, H., Dissabandara, H., & Ajward, R. (2019). Compliance with Disclosure Principles and Financial Performance: Empirical Evidence from Sri Lankan Listed Companies. *Proceedings of the 6th International Conference on Multidisciplinary Approaches (ICMA). Faculty of Graduate Studies, University of Sri Jayewardenepura*. https://ssrn.com/abstract=3497536

Dittmar, L. (2007). *First steps on a long journey: Towards an architected GRC System*. GRC 360 (Spring): 4.

Dittmar, Lee, Llp, D. C., Vogel, P., & Manager, S. (2008). *Integrating GRC with Performance Management Demands Enterprise Solutions*. October 2007.

Dodge, C. (2016). Compliance Theory of Organizations. *Global Encyclopedia of Public Administration, Public Policy, and Governance*, 1–5. https://doi.org/DOI 10.1007/978-3-319-31816-5_3000-1

Donaldson, L. (2001). *The Contingency Theory of Organizations*. Sage, Thousand Oaks.

Dowling, J. & Pfeffer, J. (1975). Organisational legitimacy: Social values and organisational behavior. *Pacific Sociological Review, 18*(1), 122–136.

Drazin, R., & de Ven, A. H. Van. (1985). *Alternative Forms of Fit in Contingency Theory. Administrative Science Quarterly, 30*(4), 514–539. https://doi.org/10.2307/2392695

Dubin, R. (1976). Theory building in applied areas. *Handbook of Industrial and Organizational Psychology*, 17–39.

Eisenhardt, Kathleen M. (1989). Agency Theory: An Assessment and Review. *Academy of Management Review, 14*(1), 57–74. https://doi.org/https://doi.org/10.5465/amr.1989.4279003.

Eisenhardt, E. M. (1989). Building theories from case study research. *Academy of Management Review, 14*(4), 532–550.

Elbardan, H., Ali, M., & Ghoneim, A. (2015). The dilemma of internal audit function adaptation: The impact of ERP and corporate governance pressures. *Journal of Enterprise Information Management, 28*(1), 93–106. https://doi.org/10.1108/JEIM-10-2013-0074

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics, 26*. https://doi.org/10.1086/467037

Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Pitman Publishing Inc. https://3lib.net/md5/3B761F9CE5E44EC5C3DFAEFA7001A113

Fudenberg, D., & Tirole, J. (1991). *Game Theory by Drew Fudenberg, Jean Tirole*. The MIT Press, London, England.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine.

González, S. M. (2016). *Fraud prevention through segregation of duties: authorization model in SAP GRC Access Control*. https://e-archivo.uc3m.es/handle/10016/23673

Halbouni, S. S., Obeid, N., & Garbou, A. (2016). Corporate governance and information technology in fraud prevention and detection: Evidence from the UAE. *Managerial Auditing Journal, 31*(6–7), 589–628. https://doi.org/10.1108/MAJ-02-2015-1163

Hale Feinstein, A., Mann, S., & Corsun, D. L. (2002). Charting the experiential territory:Clarifying definitions and uses of computer simulation, games, and role play. *Journal of Management Development, 21*(10), 732–744. https://doi.org/10.1108/02621710210448011

Hanley, J. T. (2021). GAMES, game theory, and artificial intelligence. *Journal of Defense Analytics and Logistics, 5*(2), 114–130. https://doi.org/10.1108/jdal-10-2021-0011

Hayes, R., & Philip Wallage and Hans Gortemaker. (2014). *Principles of Auditing: An Introduction to International Standards on Auditing (3rd Edition).* Pearson Education Limited.

Hazaea, S. A., Tabash, M. I., Zhu, J., Khatib, S. F. A., & Farhan, N. H. S. (2021). Internal audit and financial performance of Yemeni commercial banks: Empirical evidence. *Banks and Bank Systems, 16*(2), 137–147. https://doi.org/10.21511/bbs.16(2).2021.13

Hernández-Lara, A. B., Serradell-López, E., & Fitó-Bertran, À. (2019). Students' perception of the impact of competences on learning: An analysis with business simulations. *Computers in Human Behavior, 101*, 311–319. https://doi.org/10.1016/j.chb.2019.07.023

Hyland, M. M., & Verreault, D. A. (2003). Developing a strategic internal audit-human resource management relationship: A model and survey. *Managerial Auditing Journal, 18*(6/7), 465–477. https://doi.org/10.1108/02686900310482614

Institute of Internal Auditors. (2020). *The IIA's Three Lines Model: An update of the Three Lines of Defense*. https://www.theiia.org/en/content/position-papers/2020/the-iias-three-lines-model-an-update-of-the-three-lines-of-defense/

Irene, M., Bunyasi, G., & Muchiri. (2017). Effects of risk assessment and internal audit standards on financial performance of state-owned corporations in Kenya: a case study of the Ministry of Labor, Social, and Security Services. *Journal of Finance and Accounting, 1*(1), 1–13.

Isidro, H., & Sobral, M. (2014). The Effects of Women on Corporate Boards on Firm Value, Financial Performance, and Ethical and Social Compliance. *Journal of Business Ethics, 132*(1), 1–19. https://doi.org/10.1007/s10551-014-2302-9

Jensen, Michael C. & William H. Meckling. (1976). Theory of The Firm: Managerial Behavior, Agency Costs, and Ownership Structure. *Journal of Financial Economics, 3*, 305–360. https://doi.org/https://doi.org/10.1016/0304-405X(76)90026-X

Jones, E. E., & Davis, K. E. (1965). From acts to dispositions: the attribution process in social psychology, in L. Berkowitz (ed.), *Advances in experimental social psychology*. New York: Academic Press.

Jones, E., & Davis, K. (1965). From acts to dispositions: the attribution process in social psychology. *Advances in Experimental Social Psychology, 2*, 219–266.

Jones, G. R. & George, J. M. (2016). *Contemporary Management*. In New York: McGraw-Hill Education, 2 Penn Plaza. New York. http://www.gbv.de/dms/zbw/795492227.pdf

Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision Under Risk. *Econometrica, 47*(2), 263–291. http://web.mit.edu/curhan/www/docs/Articles/15341_Readings/Behavioral_Decision_Theory/Kahneman_Tversky_1979_Prospect_theory.pdf

Kaplan, A. (1965). The Conduct of Inquiry: Methodology for Behavioral Science. *Oxford University Press, 44*(1), 126–127. http://www.jstor.org/stable/2574840

Kelly, K. C., & Dokubo, K. (2021). Internal Audit Function and Financial Performance of Telecommunication Firms in Nigeria. *Nigerian Journal of Management Sciences, 22*(1), 151–164.

Kwabena, K. A. (2017). *Effects of internal audit quality on the financial performance of firms listed in the Nairobi Securities Exchange. Thesis*. http://erepository.uonbi.ac.ke/bitstream/handle/11295/103033/Kwabena_The_Effects_of_Internal_Audit_Quality.pdf?sequence=1&isAllowed=y

Lau, C. M. J. N. (2003). The Influence of Organisational Commitment on the Use of Financial Measures for Performance Evaluation. *In Pacific Accounting Review (Vol. 15*, Issue 1).

Lawrence, P., & Lorsch, J. (1967). Differentiation and Integration in Complex Organizations. *Administrative Science Quarterly, 12*(1), 1–47.

Limperg, T. (1932). *Theory of Inspired Confidence*. Amsterdam. University of Amsterdam.

Lynham, S. A. (2000). Theory building in the human resource profession. *Human Resource Development Quarterly, 11*(2), 159–178.

Maulidi, A., & Ansell, J. (2020). The conception of organisational fraud: the need for rejuvenation of fraud theory. *Journal of Financial Crime, 28*(3), 784–796. https://doi.org/10.1108/JFC-09-2020-0180

Meyer, J. W., & Rowan, B. (1977). Institutionalized Organizations: Formal Structure as Myth and Ceremony. *American Journal of Sociology, 83*(2), 340–363. https://doi.org/10.1086/226550

Michael B. Adams. (1994). Agency Theory and the Internal Audit. *Managerial Auditing Journal, 9*(8), 8–12.

Morgenstern, O. (1976). The Collaboration between Oskar Morgenstern and John von Neumann on the Theory of Games. *Journal of Economic Literature, 14*(3), 805–816. https://doi.org/10.1515/9781400829460.712

Mustari, K., Rusibana, C., & Nzamalu, A. (2020). Internal Audit Profession and Financial Performance in Commercial Banks In Rwanda. *Journal of Advanced Research in Business Management and Accounting, 6*(10), 12–20. https://doi.org/10.53555/nnbma.v6i10.924

Narcisa, L. (Cioban) A., & Elena, H. (2017). The Role and Implications of Internal Audit in Corporate Governance. *Eurasian Studies in Business and Economics, 4*(C), 89–101. https://doi.org/10.1007/978-3-319-39919-5_8

Nash, J. (1953). Two-Person Cooperative Games Author. *Journal of The Econometric Society, 21*(1), 128–140. http://www.jstor.org/stable/1906951

Nash, J. F. (2008). Game theory applied to computer and communication systems. *IEEE Journal on Selected Areas in Communications, 26*(7), 1041. https://doi.org/10.1109/JSAC.2008.080901

Neumann, J. and Morgenstern, O. (2004). *Theory of Games and Economic Behaviour* (Sixtieth A). Princeton University Press, Princeton. https://doi.org/https://doi.org/10.1111/j.2397-2335.1944.tb01625.x

Nimalathasan, B. (2008). A Comparative study of financial performance of banking sector in Sri Lanka – An application of CAMEL rating system. *International Journal of Accounting and Business Finance, 2*, 141–152. https://doi.org/10.4038/ijabf.v4i2.34

Nissen, V., & Marekfia, W. (2014). The Development of a Data-Centred Conceptual Reference Model for Strategic GRC-Management. *Journal of Service Science and Management, 07*(02), 63–76. https://doi.org/10.4236/jssm.2014.72007

OCEG. (2007). *Making the business case: integrating governance, risk, and compliance to drive principled performance*. PowerPoint presentation: 12.

Outa, E. R., & Waweru, N. M. (2016). Corporate Governance Guidelines Compliance and Firm Financial Performance: Kenya-Listed Companies. *Managerial Auditing Journal, 31*(8–9), 891–914. https://doi.org/10.1108/MAJ-12-2015-1291

Pagliarussi, M. S., & Leme, M. A. (2020). The institutionalization of management control systems in a family firm. *Qualitative Research in Accounting and Management, 17*(4), 649–673.

Peng, K. Z., & Emily, H. G. (2022). The affect-proactive performance link and its reciprocal process: a hedonic contingency theory perspective. *Asia Pacific Journal of Management*. https://doi.org/10.1007/s10490-022-09816-x

Pfeffer, J., & Salancik, G. (1978). *The External Control of Organizations: A Resource Dependence Perspective*. New York: Harper & Row.

Pfister, J. A., Peda, P., & Otley, D. (2023). A methodological framework for theoretical explanation in performance management and management control systems research. *Qualitative Research in Accounting and Management, 20*(2), 201–228. https://doi.org/10.1108/QRAM-10-2021-0193

Rabin, M. (2000). Risk Aversion and Expected-Utility Theory: A Calibration Theorem Matthew. *Econometrica, 68*(5), 1281–1292. https://www.jstor.org/stable/2999450

Rabiu Abdullahi, & N. M. (2018). Fraud prevention initiatives in the Nigerian public sector: understanding the relationship of fraud incidents and the elements of fraud triangle theory. *Journal of Financial Crime*, 1–18.

Racz, N., & Seufert, A. (2014). *A frame of reference for research of integrated governance, risk & compliance (GRC)*. 106–117. http://search.ebscohost.com/login.aspx?direct=true&db=edsbas&AN=edsbas.ftciteseerx.oai.CiteSeerX.psu.10.1.1.460.7364&lang=de&site=eds-live&authtype=ip,uid

Reay, T., & Whetten, D. A. (2011). What constitutes a theoretical contribution in family business? *Family Business Review, 24*(2), 105–110. https://doi.org/10.1177/0894486511406427

Ross, S. A. (1973). The economic theory of agency: the principal's problem. *American Economic Review, 63*(2), 134–139.

Rothschild, Michael & Stiglitz, J. (1976). Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information. *The Quarterly Journal of Economics, 90*(4), 629–649.

Sawyer, L. B. (1973). *Practice of Modern Internal Auditing (5th ed.)*. The Institute of Internal Auditors, Altamonte Springs, FL.

Scafarto, V., & Dimitropoulos, P. (2018). Human capital and financial performance in professional football: the role of governance mechanisms. *Corporate Governance (Bingley), 18*(2), 289–316. https://doi.org/10.1108/CG-05-2017-0096

Scott L Mitchell. (2007a). GRC360: A framework to help organisations drive principled performance. *International Journal of Disclosure and Governance, 4*(4), 279–296. https://doi.org/10.1057/palgrave.jdg.2050066

Scott L Mitchell. (2007b). IT and GRC: A crucial partnership. *GRC 360 (Spring)*. 13–16.

Siahaan, M., Nauli, T. D., & Siahaan, B. P. (2024). Can Internal Mechanisms Control Detect Corruption Through Fraudulent Behaviour? *AFRE Accounting and Financial Review, 7*(1), 1–8. https://jurnal.unmer.ac.id/index.php/afr/article/view/11893

Siahaan, M., Suharman, H., Fitrijanti, T., & Umar, H. (2023a). When internal organizational factors improve detecting corruption in state-owned companies. *Journal of Financial Crime, 31*(2), 376–407. https://doi.org/10.1108/JFC-11-2022-0292

Siahaan, M., Suharman, H., Fitrijanti, T., & Umar, H. (2023b). Will the integrated GRC implementation be effective against corruption? *Journal of Financial Crime, 30*(1), 24–34. https://doi.org/10.1108/jfc-12-2021-0275

Singh, K. S. D., Ravindran, S., Ganesan, Y., Abbasi, G. A., & Haron, H. (2021). Antecedents and internal audit quality implications of internal audit effectiveness. *International Journal of Business Science and Applied Management, 16*(2), 1–21.

Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics, 87*, 355–374.

Steadman, M. E., & Green, R. F. (1997). An extension of stakeholder theory research: developing surrogates for net organizational capital. *Managerial Auditing Journal, 12*(3), 142–147. https://doi.org/10.1108/02686909710161031

Sulub, S. A., Salleh, Z., & Hashim, H. A. (2020). Corporate governance, SSB strength, and the use of internal audit function by Islamic banks: Evidence from Sudan. *Journal of Islamic Accounting and Business Research, 11*(1), 152–167. https://doi.org/10.1108/JIABR-12-2016-0148

Tanjung, M. (2020). A cross-firm analysis of corporate governance compliance and performance in Indonesia. *Managerial Auditing Journal, 35*(5), 621–643. https://doi.org/10.1108/MAJ-06-2019-2328

Thompson, J. D., & McEwen, W. J. (1958). Organizational Goals and Environment: Goal-Setting as an Interaction Process. *American Sociological Review, 23*(1), 23–31. https://doi.org/10.2307/2088620

Ullmann, A. A. (1985). Data in Search of a Theory: A Critical Examination of the Relationships among Social Performance, Social Disclosure, and Economic Performance of U. S. Firms. *The Academy of Management Review, 10*(3), 540. https://doi.org/10.2307/258135

Vadasi, C., Bekiaris, M., & Andrikopoulos, A. (2020). Corporate governance and internal audit: an institutional theory perspective. *Corporate Governance (Bingley), 20*(1), 175–190. https://doi.org/10.1108/CG-07-2019-0215

Verschoor, C. C. (1998). A study of the link between a corporation's financial performance and its commitment to ethics. *Journal of Business Ethics, 17*(13), 1509–1516. https://doi.org/10.1023/A:1006020402881

Von Neumann, J. (1928). *"Zur theorie der Gesellschaftespiele." Mathematische Annalen*, 100, 295–320.

Vousinas, G. L. (2019). Advancing theory of fraud: the S.C.O.R.E. model. *Journal of Financial Crime, 26*(1), 372–381. https://doi.org/10.1108/JFC-12-2017-0128

Whetten, D. A. (1989). What Constitutes a Theoretical Contribution? *The Academy of Management Review, 14*(4), 490. https://doi.org/10.2307/258554

Williamson, O. E. (1985). The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting. University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference *in Entrepreneurship*. https://ssrn.com/abstract=1496720

Wüst, K., & Kuppinger, B. (2012). Is everything just a game? From the discrete to the continuous time modeling of corporate strategy games. *Journal of Management Control, 23*(3), 211–228. https://doi.org/10.1007/s00187-012-0164-9

Xue, S., Tang, Y., Xu, Y., Ling, C. D., Xie, X. Y., & Mo, S. (2022). How boards' factional faultlines affect corporate financial fraud. *Asia Pacific Journal of Management*, 10490. https://doi.org/10.1007/s10490-022-09859-0