INTERNAL AUDIT CHARACTERISTICS AND ROLE OF ENTERPRISE RISK MANAGEMENT EFFECTIVENESS WITH MEDIATION AND MODERATION EFFECTS ON PUBLIC LISTED COMPANIES IN JORDAN

By

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Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of Doctor of Philosophy

January 2024

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

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In the contemporary landscape of high-risk business environments, public-listed companies (PLCs) are increasingly acknowledging the significance of implementing enterprise risk management (ERM) to navigate uncertainties and fortify their resilience. Despite the evident benefits and global implementation of ERM practices, its implementation in certain regions, particularly in developing countries like Jordan, remains in a formative stage, hampered by a myriad of challenges that impede its effectiveness. For instance, informal and incomplete ERM implementation, a lack of integration with company processes, and a shortage of ERM knowledge, as well as a dearth of professionally skilled risk managers and staff, contribute to these challenges. In this regard, the resource-based view (RBV) theory posits that a company's internal resources, including internal audits (IA), are valuable, rare, imperfectly imitable, and non-substitutable, constituting strong factors for achieving sustainable competitive advantage, particularly through enhanced enterprise risk management effectiveness (ERME). Therefore, the objectives of this study are to investigate the effects of internal auditors' characteristics, internal audit department (IAD) characteristics, IA role in ERM, and internal audit effectiveness (IAE) on ERME. It also investigates the effects of internal auditors' characteristics, IAD characteristics, and IA role in ERM on IAE. Furthermore, the study investigates the mediating effect of IAE in the relationship between IA (characteristics and role) and ERME. Additionally, it investigates the moderating roles of ownership structure concentration (OSC) and organizational culture (OC) on the relationship between IAE and ERME in Jordanian PLCs. To achieve these objectives, this study employs a quantitative cross-sectional methodology. Data was collected using a questionnaire based on seven constructs which are internal auditors' characteristics, IAD characteristics, IA role in ERM, IAE, OSC, OC, and ERME from Jordanian PLCs. Finally, 119 questionnaires were utilized for analysis. The data was prepared through SPSS software and analyzed using structural equation modeling through SmartPLS software. The results reveal significant positive effects of internal auditors' characteristics, IAD characteristics, and IA role in ERM on both ERME and IAE. Additionally, IAE shows a significant positive effect on ERME. Furthermore, IAE plays a significant positive mediating role between internal auditors' characteristics, IAD characteristics, and ERME. Moreover, OC plays a significant positive moderating role in the relationship between IAE and ERME. The study contributes to the knowledge base by breaking the silence on ERM and its status in Jordanian PLCs. It strengthens the RBV theory and enriches the scarcity of research in the domain of IA and ERM integration, particularly in developing countries. Furthermore, it is one of a kind in investigating IAE mediation, as well as OSC and OC moderation. This study offers a cost-effective solution to PLC to enhance ERME through IA characteristics, roles, and effectiveness as valuable internal resources. It

emphasizes the role of OC in strengthening the integration between IAE and ERME. Undeniably, the grave importance of owner support for both IA and ERM, emphasizing the necessity of their integration to safeguard the company, irrespective of ownership concentration levels or types is imperative.

Keywords: Internal Audit, Enterprise Risk Management, Ownership Structure, Organizational Culture, Jordan.

SDG: GOAL 8: Decent Work and Economic Growth

Abstrak tesis yang dikemukakan kepada Senat of Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

CIRI-CIRI AUDIT DALAMAN DAN PERANANNYA TERHADAP KEBERKESANAN PENGURUSAN RISIKO PERUSAHAAN DENGAN KESAN PERANTARAAN DAN PENYEDERHANAAN PADA SYARIKAT TERSENARAI AWAM DI JORDAN

Oleh

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Dalam lanskap kontemporari persekitaran perniagaan berisiko tinggi, syarikat-syarikat tersenarai awam (PLC) semakin mengakui kepentingan pelaksanaan pengurusan risiko korporat (ERM) untuk menavigasi ketidakpastian dan mengukuhkan daya tahan mereka. Walaupun manfaat yang nyata dan pelaksanaan ERM secara global, pelaksanaannya di kawasan tertentu, terutamanya di negara membangun seperti Jordan, masih dalam peringkat formatif, terhalang oleh pelbagai cabaran yang merintangi keberkesanannya. Contohnya, pelaksanaan ERM yang tidak formal dan tidak lengkap, kekurangan integrasi dengan proses syarikat, kekurangan pengetahuan ERM, serta kekurangan pengurus risiko dan kakitangan yang terlatih secara profesional menyumbang kepada cabaran ini. Dalam konteks ini, teori pandangan berasaskan sumber (RBV) menyatakan bahawa sumber-sumber dalaman syarikat, termasuk audit dalaman (IA), adalah berharga, jarang, tidak sempurna boleh ditiru, dan tidak dapat diganti, menjadi faktor kuat untuk mencapai kelebihan daya saing yang mampan, terutama melalui peningkatan keberkesanan pengurusan risiko

korporat (ERME). Oleh itu, objektif kajian ini adalah untuk menyiasat kesan ciri-ciri juruaudit dalaman, ciri-ciri jabatan audit dalaman (IAD), peranan IA dalam ERM, dan keberkesanan audit dalaman (IAE) terhadap ERME. Ia juga menyiasat kesan ciri-ciri juruaudit dalaman, ciri-ciri IAD, dan peranan IA dalam ERM terhadap IAE. Selain itu, kajian ini menyiasat kesan pengantaraan IAE dalam hubungan antara IA (ciri-ciri dan peranan) dan ERME. Tambahan pula, ia menyiasat peranan moderasi struktur pemilikan berkumpul (OSC) dan budaya organisasi (OC) dalam hubungan antara IAE dan ERME dalam PLC Jordan. Untuk mencapai objektif ini, kajian ini menggunakan metodologi keratan rentas kuantitatif. Data dikumpulkan menggunakan soal selidik berdasarkan tujuh konstruk iaitu ciri-ciri juruaudit dalaman, ciri-ciri IAD, peranan IA dalam ERM, IAE, OSC, OC, dan ERME dari PLC Jordan. Akhirnya, 119 soal selidik digunakan untuk analisis. Data disediakan melalui perisian SPSS dan dianalisis menggunakan model persamaan struktur melalui perisian SmartPLS. Keputusan menunjukkan kesan positif yang signifikan dari ciri-ciri juruaudit dalaman, ciri-ciri IAD, dan peranan IA dalam ERM terhadap kedua-dua ERME dan IAE. Selain itu, IAE menunjukkan kesan positif yang signifikan terhadap ERME. Tambahan pula, IAE memainkan peranan pengantaraan yang signifikan positif antara ciri-ciri juruaudit dalaman, ciri-ciri IAD, dan ERME. Selanjutnya, OC memainkan peranan moderasi yang signifikan positif dalam hubungan antara IAE dan ERME. Kajian ini menyumbang kepada pangkalan pengetahuan dengan memecah kebisuan tentang ERM dan statusnya dalam PLC Jordan. Ia mengukuhkan teori RBV dan memperkaya kelangkaan penyelidikan dalam domain integrasi IA dan ERM, terutamanya di negara membangun. Selain itu, ia unik dalam menyiasat pengantaraan IAE, serta moderasi OSC dan OC. Kajian ini menawarkan penyelesaian kos-efektif kepada PLC untuk meningkatkan ERME melalui ciri-ciri, peranan, dan keberkesanan IA sebagai sumber dalaman yang berharga. Ia menekankan peranan OC dalam memperkukuhkan integrasi antara IAE dan ERME. Tidak dapat disangkal, kepentingan besar sokongan pemilik terhadap kedua-dua IA dan ERM, menekankan keperluan integrasi mereka untuk melindungi syarikat, tidak kira tahap atau jenis kepekatan pemilikan, adalah penting.

Kata Kunci: Audit Dalaman, Pengurusan Risiko Perusahaan, Struktur Pemilikan, Budaya Organisasi, Jordan.

SDG: MATLAMAT 8: Kerja Yang Layak dan Pertumbuhan Ekonomi

ACKNOWLEDGEMENTS

First and foremost, I would like to express my deep gratitude to Allah (SWT) for granting me life, good health, and wisdom in pursuing this great achievement. I would also like to acknowledge and humbly appreciate the immense contributions of my supervisor, Dr. Sabarina Mohammed Shah, for offering me invaluable advice and supporting me throughout this journey. I am also indebted to my co-supervisor, Associate Professor Dr. Mazlina Mustapha and Dr. Jalila Johari, for their invaluable contributions, support, advice, and encouragement.

In dedicating this thesis to my late father, Ahmad Jaber, despite his passing, his unwavering support, encouragement, and love continue to inspire me. Dad, your memory will forever motivate me to strive for excellence in all that I do. I'm grateful for my mother's, Muntaha Khreis, unwavering support in completing this thesis. Her prayers, encouragement, and financial assistance kept me focused and motivated. Her belief in my abilities gave me the strength to persevere, and I'm deeply thankful for her love and support.

To my dear siblings, Osama, Walaa, Dr. Malak, and Hend, I'm grateful for your unwavering support and encouragement throughout this journey. Your belief in me and constant motivation were crucial in completing this thesis. Additionally, I extend my sincere appreciation to my brothers-in-law and friends whose unwavering support, inspiration, and encouragement were instrumental in my journey to complete this thesis.

This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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Date: 18 April 2024

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AC	Audit Committee
CG	Corporate Governance
AVE	Average Variance Extracted
CBJ	Central Bank of Jordan
COSO	Committee of Sponsoring Organizations of the Treadway Commission
ASE	Amman Stock Exchange
IIA	Institute of Internal Auditors
BODs	Board of Directors
EA	External Audit
PLCs	Public Listed Companies
ERME	Enterprise Risk Management Effectiveness
HTMT	Heterotrait-Monotrait Ratio
IAD	Internal Audit Department
GDP	Gross Domestic Product
IA	Internal Audit
UK	United Kingdom
JOD	Jordanian Dinar
JSC	Jordan Securities Commission
OSC	Ownership Structure Concentration
IAE	Internal Audit Effectiveness
ERM	Enterprise Risk Management
PLS	Partial Least Squares
OC	Organizational Culture
RM	Risk Management

SDC	Securities Depository Center
SEM	Structural Equation Modeling
SPSS	Statistical Package for the Social Sciences
US	United States
RBV	Resource-Based View
VIF	Variance Inflation Factor
IPPF	International Professional Practices Framework

CHAPTER 1

INTRODUCTION

1.1 Introduction

In the past decade, companies across various sectors and sizes have encountered significant challenges stemming from the volatile, uncertain, complex, and ambiguous nature of the contemporary business environment (Taskan et al., 2022; Uzcategui et al., 2015). To cope with this unpredictable landscape, numerous companies are transitioning from traditional risk management (RM) to adopting enterprise risk management (ERM) as a strategic approach for both mitigating risks and maximizing opportunities (Perera, 2019; Sekerci & Pagach, 2020). ERM entails a systematic and comprehensive method of identifying, assessing, prioritizing, and managing risks across the company (Hervananda & Subroto, 2021), making it an imperative business process in recent years (Pérez-Cornejo & de Quevedo-Puente, 2023).

Evidence supports that companies with effective ERM perform better than those without ERM or with ineffective ERM. Recent studies conducted by Al-Nimer et al. (2021); Hamzah et al. (2022); Pangestuti et al. (2023) consistently revealed a significant and positive effect of ERM on companies' performance in Jordan, Malaysia, and Southeast Asia, respectively. Sulaeman & Putra (2023); Tarjo et al. (2022) found ERM's significant and positive effect on decision-making processes, business continuity, and fraud prevention and detection in Indonesia. The study conducted by Heng et al. (2023); Orabueze et al. (2020) found ERM's significant and positive effect on companies' value, sustainability, and survival in Malaysia and Nigeria. ERM offers companies a multitude of additional advantages, including a comprehensive perspective on risks, increased awareness of potential risks, proactive risk mitigation, effective resource allocation, adherence to regulatory requirements, and a competitive edge over others in the market (Kaddumi et al., 2022; Sae-Lim, 2017; Sax & Andersen, 2018; Vij, 2019).

ERM is mandated in a few developed countries, such as the United States (US) and the United Kingdom (UK), while also becoming a best practice for companies, especially larger ones, even in the absence of regulatory requirements, such as in Jordan (Altanashat et al., 2019; Zou & Hassan, 2017). However, despite the advantages of ERM, several companies still rely on conventional RM practices or partial and informal ERM due to the complexity of the ERM process and the resources and cooperation required from all departments within the company (Čular et al., 2020; González, et al., 2020; Javaid & Aslam, 2021). Even widely regulated companies face challenges with ERM implementation and effectiveness (Hiebl et al., 2019; Mardessi & Arab, 2018a). The literature identifies several common challenges and issues, including management resistance to change, a lack of ERM awareness, unqualified staff, and inadequate investment (Al-Khadash & Jireis, 2017; Lanz, 2018; Moshesh et al., 2018), particularly in the Jordanian public listed companies (PLCs) context. Therefore, companies must prioritize ensuring the enterprise risk management effectiveness (ERME) to fully reap its advantages, as it is considered a crucial issue (Spanò & Zagaria, 2022; Ui-Hameed et al., 2020).

1.2 Background of the Study

ERME in companies depends not only on the characteristics and effectiveness of the function itself but also on the broader organizational context in which it operates (Hamzah et al., 2022). Key contextual factors and internal parties of the company that can influence the ERME include internal auditors' characteristics, internal audit department (IAD) characteristics, the internal audit (IA) role in ERM, internal audit effectiveness (IAE), ownership structure concentration (OSC), and organizational culture (OC).

In terms of internal auditors and IAD characteristics, in 1999, the Institute of Internal Auditors (IIA) modified the IA definition to comprise ensuring the effectiveness of RM as a major responsibility for internal auditors (Jones & Glover, 2018; Lenz & Hoos, 2023). Evidence underscores the vital role of IA leadership in enhancing ERME by establishing robust frameworks, fostering risk cultures, integrating ERM into organizational processes, and ensuring adequate resources and capabilities (Javaid & Aslam, 2021; Mardessi & Arab, 2018b; Naik & Prasad, 2021). This acknowledgment reflects the unique position of internal auditors to contribute to ERM. This is based on the fact that internal auditors and the IAD possess characteristics that enable them to provide RM services, including access authorization, independence, objectivity, knowledge of organizational operations, experience, and proper training (Abu-Saleem et al., 2019; Arena & Sarens, 2015; Nabulsi & Haidoura, 2018). Internal auditors are well-suited to contribute to ERM initiatives and offer helpful insights into risk identification, assessment, and mitigation because of these and other characteristics.

In terms of the IA role ERM, IA can undertake dual roles, namely assurance and consulting, both considered equally vital for the company (Eulerich et al., 2019; Viljoen & Barac, 2015). In the assurance role, internal auditors assess the effectiveness of RM processes and controls, providing independent evaluations to ensure compliance and effective risk mitigation. On the other hand, the consulting role involves offering guidance, recommendations, and training to enhance the company's RM practices, aligning them with industry best practices, and fostering a risk-aware culture (IIA, 2009). The specific roles internal auditors play may vary based on the company's level of ERM maturity (Florea & Florea, 2016; Onay, 2021b). In the early stages of ERM maturity, internal auditors are expected to focus more on consulting, transitioning to a greater emphasis on their core role as ERM matures within the company. Their involvement ensures the establishment of a robust ERM framework that complies with regulatory requirements, enhances risk mitigation, and contributes value to the company's governance and control environment (Mardessi & Arab, 2018b; Onay, 2021b; White et al., 2019).

In terms of IAE, it refers to the extent to which the function achieves its stated goals outlined in the audit charter, ultimately enhancing organizational performance and significantly contributing to the overall effectiveness and efficiency of governance, RM, and control processes (Almahuzi, 2020; Ui-Hameed et al., 2020). Despite possessing all the necessary characteristics, the company's internal auditors and IAD may still face challenges in effectively achieving their objectives and responsibilities, potentially hindering ERME. An effective IA function is considered a potent internal control tool for monitoring and supporting good governance structures in the company, (Boateng and Zoiku, 2021), especially in the context of ERME (Abu

Kwaik et al., 2023; Ui-Hameed et al., 2020). Furthermore, understanding the mediating role of IAE offers valuable insights into the underlying processes that drive the impact of internal auditors' characteristics, IAD characteristics, and IA's role in ERM on ERME. In essence, IAE can serve as a bridge, effectively connecting IA's resources and directing them to enhance ERME.

Previous studies have primarily focused on investigating the direct effect of IAE on ERM and consistently found a significant positive relationship in diverse countries, such as Malaysia (Ismail et al., 2023), Jordan (Abu Kwaik et al., 2023), and Ghana (Boateng & Zoiku, 2021). However, these studies have neglected to explore the mediating role of IAE in the relationships between internal auditors' characteristics, IAD characteristics, and IA's role in ERM, along with its subsequent impact on ERME. In contrast, studies by Sulistiani et al. (2023) and Lonto et al. (2023) have delved into the mediating role of IAE in relationships between IA independence and good governance, as well as IA independence and fraud prevention. Their findings highlight the effective mediating role of IAE, emphasizing its application in bridging the significance between IA characteristics and corporate governance (CG).

Despite the significant acknowledgment of IA support and its role in enhancing ERME, various issues and challenges persist concerning internal auditors' characteristics, IAD characteristics, IA's role in ERM, and IAE. These challenges may be particularly pronounced in developing countries where IA is not mandated, posing additional limitations. For instance, concerning internal auditors' characteristics, there is still a notable deficiency in achieving an appropriate level of objectivity, coupled with a lack of skills and knowledge (Joshi, 2021; Yanti et al., 2022). In terms of IAD characteristics, several companies face challenges in securing the required independence, financial and non-financial management support, and collaboration (Joshi, 2021; Sulaiman et al., 2022). In terms of IA's role in ERM, concerns arise about the involvement of internal auditors in ERM, potentially hindering their objectivity due to conflicts of interest and ambiguity (Abdullatif & Kawuq, 2015; White et al., 2019). Concerning IAE, in numerous companies, IA demonstrates minimal effectiveness rather than advanced, indicating a failure to achieve its intended goals (Ludin et al., 2017; Teoh et al., 2017).

Moreover, recognizing the intricate relationship between IAE and ERME is crucial; however, this relationship is susceptible to various company-related factors, including OSC and OC. In terms of OSC, OSC refers to the extent to which ownership of a company's shares or equity is held by a limited number of individuals, institutions, or entities (Amin et al., 2018). The concentration of ownership can have substances effect on decision-making processes, monitoring practices, and RM practices, particularly in a weak legal environment (Alhababsah, 2019; Kao et al., 2018; Segrestin et al., 2018). Although evidence has yielded mixed results regarding the effect of OSC on IA and ERM (Keong et al., 2020; Park et al., 2019; Rönkkö et al., 2018; Suwaidan & Khalaf, 2020), several cases highlight a company's ownership structure as a cause of resource shortages and inadequate management support, especially in developing countries where OSC is very high (Keong et al., 2020). Consequently, this may decrease the need for effective IA and ERM, potentially reducing their integration.

In terms of OC, OC is defined as the shared values, beliefs, and norms that shape the behaviors and attitudes of individuals within a company (Ahmady et al., 2016). OC has been identified as a critical aspect of organizational activities that significantly affects company effectiveness, the quality of its products/services, and successful development (Alqaraleh et al., 2022; Salih & Hla, 2016). A culture that emphasizes transparency, accountability, and risk awareness is expected to enhance the relationship between IAE and ERME, while a hierarchical and rigid culture is anticipated to harm this relationship (Hervananda & Subroto, 2021; Javaid & Aslam, 2021). Evidence consistently reveals that OC significantly and positively affects IAE and ERME (Alqaraleh et al., 2022; Chen et al., 2019; Hassan et al., 2022). However, OC in larger companies is often considered complex, challenging to manage, and requires a robust foundation from top-level leadership, in contrast to small and medium-sized enterprises. Therefore, it necessitates careful attention from top management to employees; otherwise, it may hinder the effectiveness of IA and ERM, potentially reducing their integration.

Furthermore, after considering both empirical and practical standpoints, it is crucial to also take into account the theoretical perspective. Previous IA studies have primarily focused on agency theory, transaction cost theory, and institutional theory. This study expands the theoretical work by incorporating the RBV theory as a primary theory to establish the relationships between IA, OC, and ERME. Additionally, the study validates the theoretical work by applying agency theory to establish the relationship between OSC and the IAE-ERME relationship. The RBV theory focuses on company-specific internal resources and capabilities to achieve sustainable competitive advantage (Barney, 1991). It proposed that unique tangible and intangible resources create value and drive superior performance (Barney, 1991; Galbreath, 2005; Wenerfelt, 1984). Hence, companies could benefit from the IA characteristics and role, IAE, and OC as valuable internal resources in enhancing ERME and achieving sustainable competitive advantage (Deloitte, 2015; Ghaleb et al., 2020; Nabulsi & Haidoura, 2018).

Agency theory explores the relationship between principals (owners) and agents (managers) within a company, which is known as an agency relationship (Fama & Jensen, 1983; Mitnick, 2019). The theory assumes that this relationship is marred by a kind of conflict between owners and managers due to several factors, such as the separation of ownership from control, risk preference, and information asymmetry (Eisenhardt, 1989; Fama & Jensen, 1983; Panda & Leepsa, 2017). In line with this conflict, the company incurs agency costs to monitor and control the managers' behavior, ensuring they work to maximize the owners' value. Hence, the theory assumes that OSC is a crucial factor related to the level of agency conflict and cost (Jensen & Meckling, 1976; Panda & Leepsa, 2017). It also suggests that companies with higher OSC may decrease their support to IA and ERM, potentially hindering their interrelationship, owing to the lower agency conflicts in such companies (Sarens, 2007; Sarens & Abdolmohammadi, 2011).

This study has identified numerous gaps in both literature and practice within the domains of IA, ERM, OSC, and OC. In terms of literature gaps, firstly, research on ERME is limited (Togok, 2016; Whittle & Nel-Sanders, 2022). Secondly, there is a scarcity of studies on ERM in developing countries, particularly in the context of PLCs in Jordan (Abu Kwaik et al., 2023; Shatnawi et al., 2020). Thirdly, few studies have explored the direct relationship between IA and ERM, specifically focusing on IA characteristics and roles (Abu Afifa & Saleh, 2021; Joshi, 2021). Fourthly, research often neglects the direct effect of IA's role in ERM on IAE. Fifthly, the mediating role of IAE in the relationship between internal auditors' characteristics, IAD characteristics, IA role in ERM and ERME is frequently overlooked. Sixthly, the moderating role of OSC and OC on the relationship between IAE and ERME has received limited attention.

In terms of practical gaps, firstly, IA functions in several companies do not fully adhere to the IIA standards and best practices regarding IA characteristics, particularly in developing countries such as Jordan (Al-amro, 2020; Turetken et al., 2020). Secondly, IA functions in several companies do not fully comply with IIA recommendations regarding IA's role in ERM. In some companies, the IAD retains responsibility for RM and ERM, with internal auditors primarily focusing on the assurance role rather than the consulting role. They remain involved in some ERM-related management roles (Abdullatif & Kawuq, 2015; Kasim et al., 2011; Mardessi & Arab, 2018b; White et al., 2019).

Thirdly, ERM implementation and effectiveness in several companies continue to face numerous issues and challenges, especially in developing countries (Altanashat et al., 2019; Brandt et al., 2021; Shatnawi et al., 2020). Fourthly, prior research indicates that concentrated ownership structures in developing countries and weak legal environments significantly influence company decision-making and monitoring processes (Keong et al., 2020; Suwaidan & Khalaf, 2020). Fifthly, some companies overlook the important role of cultivating a strong OC that promotes RM, auditing, and collaboration between their activities and operations, especially in large companies (Cameron & Quinn, 2006; Kwateng et al., 2022). These research gaps highlight the need for further investigation to address these critical areas and enhance our understanding of ERM and its related factors, especially in developing countries like Jordan.

Jordan, the Hashemite Kingdom of Jordan, is a small country located in the Middle East with a rapidly developing economy (Abdullatif & Kawuq, 2015). The country has undergone significant economic and political changes, presenting challenges for businesses, particularly PLCs, in terms of managing risks associated with resource availability, market volatility, and regulatory compliance (Badarin, 2020; Kaddumi et al., 2022). Jordanian PLCs are significant players in the country's economy and among the most prominent companies in Jordan. They make significant contributions to the gross domestic product (GDP), with the market value of their listed shares accounting for 49.9% and 56% of Jordanian GDP in 2021 and 2022, respectively (ASE, 2021a, 2022a). Therefore, there is a critical need for PLCs in Jordan to enhance their ERME and overcome its challenges to ensure their survival and enhance performance.

Achieving ERME is typically not a simple process (Javaid & Aslam, 2021), especially for Jordanian PLCs, where it is still a recent concept. It also requires the allocation of various resources and collaboration from all internal parties within the company (Praise & Rapina, 2022). Therefore, this study aims to investigate the effect of internal auditor characteristics, IAD characteristics, and IA role in ERM on ERME in Jordanian PLCs. Additionally, the study aims to investigate the effect of internal auditors' characteristics, IAD characteristics, and IA role in ERM on IAE. Furthermore, it investigates the relationship between IAE and ERME and whether IAE mediates the relationship between internal auditor characteristics, IAD characteristics, IA role in ERM, and ERME. Moreover, the study investigates the moderating role of OSC and OC on the relationship between IAE and ERME. These investigations are conducted from the RBV theory and agency theory perspective, focusing on a developing country context, specifically Jordan.

1.3 Problem Statement

ERM is worldwide recognized for strategically managing risks and maximizing opportunities in uncertain business environments. Effective implementation offers long-term advantages like enhanced performance, competitive advantage, and sustainability. Initially implemented mainly by developed countries, ERM interest is growing in developing countries. However, ERM is complex, requiring collaboration and substantial resources. Many companies, especially in developing countries, encounter challenges in ERM, evident in events like the 2008 financial crisis and the 2020 Covid-19 pandemic.

Prior literature has highlighted various issues related to ERM, including informal implementation, ineffectiveness, and a lack of awareness and knowledge about ERM procedures. These challenges have been identified in different countries such as France (Khan et al., 2016), Malaysia (Ui-Hameed et al., 2020), Oman (Al-Farsi, 2020), and Nigeria (Ojeka et al., 2019). Notably, in practical cases, Wells Fargo, the largest US bank, faced a $190 million fine in 2016 for a failure in internal controls leading to misappropriation of assets (Sridharan & Hadley, 2018). The Union Bank of Switzerland also suffered significant losses during the global financial crisis due to traditional RM methods (Harner, 2010). Additionally, the American International Group's failure to implement ERM nearly caused its collapse during the 2008 financial crisis (Pathak et al., 2013).

Similarly, the effectiveness of ERM in Jordanian PLCs faces numerous issues and challenges, as highlighted by researchers, industry, and the impact on the economy. Key issues include the absence of a mandated ERM framework, inadequate compliance systems, and a lack of integration into company processes (Altanashat et al., 2019; Shatnawi et al., 2020, 2022). ERM is still in its early stages, with staff lacking expertise and training (Al-Khadash & Jireis, 2017; Altanashat et al., 2019). ERM strategies are considered below the required level, and their effectiveness is questioned (Kaddumi et al., 2022; Shahin & Al-Hadidi, 2017). Additionally, ERM in Jordan is understudied and underreported (Al-Nimer et al., 2021; Shatnawi et al., 2020). Companies perceive it as time-consuming and costly, with resistance to change from staff and a lack of commitment from senior management (Al-Khadash & Jireis, 2017). The formal and comprehensive application of ERM is lacking, leading to difficulties in predicting future activities (Abu Afifa & Saleh, 2021; Al-Khadash & Jireis, 2017).

These criticisms are also acknowledged by Jordanian economic analysts and specialists, indicating that some Jordanian companies encounter challenges in RM, CG, compliance, and risk-based audits (Petra, 2022). The head of the Audit Bureau, Assem Haddad[1], has also highlighted that numerous government-invested companies in Jordan are undergoing financial losses due to weaknesses in their RM, internal control, and audit systems (Almamlaka, 2021). Ibrahim Al-Malkawie[2] emphasizes the lack of integrated operation of governance, risk, and compliance elements as contributing factors to ERME (Al-Malkawi, 2021). Moreover, Ziad Al-Dabbas[3] identifies the absence of good CG as a significant cause of corruption within companies and stresses its importance in combating corruption (Al-Dabbas, 2018). Additionally, Al-Dabbas notes that Jordanian PLCs' RM procedures and implementations are weak, characterized by a lack of risk awareness and professional risk managers (Al-Dabbas, 2015, 2016, 2018).

Furthermore, the Jordanian economy has been influenced by several events over the last two decades, most recently the Covid-19 health crisis in 2020. Amidst this crisis, Jordanian companies grappled with cash flow challenges, diminished demand and supply, and disruptions in value chains (Abu Afifa & Saleh, 2021; Badarin, 2020). The annual reports of the Amman Stock Exchange (ASE) reveal a decline in the number of PLCs in Jordan, decreasing from 272 in 2009 to 172 in 2021, with 22 companies being delisted between 2020 and 2021 alone (ASE, 2009, 2020a, 2021b). Several companies, as indicated in their financial reports, cited issues stemming from the risks posed by the Covid-19 crisis and its repercussions. The Central Bank of Jordan's (CBJ) 2020 financial stability report notes a contraction of approximately -1.55% in the economy in 2020, in stark contrast to the 2% economic growth witnessed in 2019 (CBJ, 2020). The report further underscores 2020 as a challenging

[1] Assem Haddad is the president of the audit bureau of Jordan (2019-2022).
[2] Ibrahim Al-Malkawie is a Jordanian expert in strategic planning and institutional performance management.
[3] Ziad Al-Dabbas is a Jordanian writer, economic expert, and analyst.

year for the non-financial companies sector, with a majority experiencing declines in their financial indicators, largely due to the effects of the Covid-19 crisis.

The failure to implement a formal and comprehensive ERM system will impede the achievement of ERME, which is imperative for PLCs sustainability. Ineffective ERM places companies at risk of financial losses, missed opportunities, reputational damage, compliance failures, and internal disruptions, thus limiting their strategic agility. Furthermore, it undermines overall resilience, leading to reduced investor confidence, heightened systemic risks, and legal implications. Despite the recognition of the IA function as an internally valuable resource, given the characteristics inherent in internal auditors and the IAD, as well as their distinct roles in assurance and consultation, these features empower the function and lend legitimacy to its role in mitigating risks and enhancing ERME. However, PLCs in Jordan, similar to those in other developing countries, face criticisms concerning IA characteristics and roles to some extent. This criticism is attributed to the inadequate support for these characteristics and the observation that internal auditors continue to perform prohibited roles (Abdullatif & Kawuq, 2015; Al-amro, 2020; Al-hroot, 2013). As these characteristics and roles are determinants of IAE, the criticism has the potential to negatively impact the IAE level (Alqudah et al., 2019a). Consequently, this contributes to a decrease in the integration between IA and ERM, thereby affecting overall ERME. This is particularly evident in the case of Jordanian PLCs, which have faced significant criticism for their failure to achieve ERME. The issue is further exacerbated by the high OSC and the unique OC in which these PLCs operate (Aldegis, 2018; Suwaidan & Khalaf, 2020).

To address these challenges and ensure ERME, companies must prioritize collaboration among CG mechanisms, particularly IA and ERM. Therefore, this study offers a cost-effective solution based on IA, including internal auditors' characteristics, IAD characteristics, and the IA role in ERM, aimed at enhancing ERME. Additionally, the study highlights other factors that can contribute to strengthening the relationship between IA and ERME, namely IAE, OSC, and OC. This study draws on literature from developed countries, institutional recommendations such as those from IIA and the Committee of Sponsoring Organizations of the Treadway Commission (COSO), as well as theories such as the RBV theory and Agency theory to fill in the gap in both knowledge and practice.

Ensuring ERME in Jordanian PLCs can safeguard their sustainability, enhance performance, reduce sensitivity to crises, build and maintain stakeholder trust, and seize opportunities for growth and innovation. In essence, effective ERM becomes a strategic enabler for sustained success and resilience in the dynamic business landscape. Hence, Jordanian PLCs should actively support the IA function and ensure its seamless integration with ERM, as it serves as a valuable internal resource to the company and plays a significant leadership role in ERM. Additionally, they should raise awareness among owners or shareholders about the importance of supporting and integrating both IA and ERM. This includes ensuring the existence of a supportive OC that facilitates the seamless integration of IA and ERM functions.

1.4 Research Questions

The general question of this study is: What is the effect of IA characteristics and role on ERME in Jordanian PLCs, taking into account the potential mediation effects of IAE and the moderation effects of OSC and OC? In more detail, the specific questions of this study are:

RQ1: How does the IA (internal auditors' characteristic, IAD characteristic, IA role in ERM) affect the ERME and IAE in Jordanian PLCs?

(a): How do internal auditors' characteristics affect ERME?

(b): How do internal auditors' characteristics affect IAE?

(c): How do IAD characteristics affect ERME?

(d): How do IAD characteristics affect IAE?

(e): How does the IA role in ERM affect ERME?

(f): How does the IA role in ERM affect IAE?

RQ2: How does the IAE affect ERME in Jordanian PLCs?

RQ3: How does the IAE mediate the relationship between IA (internal auditors' characteristics, IAD characteristics, and the IA role in ERM) and ERME in Jordanian PLCs?

(a): How does IAE mediate the relationship between internal auditors' characteristics and ERME?

(b): How does IAE mediate the relationship between IAD characteristics and ERME?

(c): How does IAE mediate the relationship between the IA role in ERM and ERME?

RQ4: How does the OSC moderate the relationship between IAE and ERME in Jordanian PLCs?

RQ5: How does the OC moderate the relationship between IAE and ERME in Jordanian PLCs?

1.5 Research Objectives

The general objective of this study is: To investigate the effect of IA characteristics and role on ERME in Jordanian PLCs, taking into account the potential mediation effects of IAE and the moderation effects of OSC and OC. In more detail, the specific objectives of this study are:

RO1: To investigate the relationship between IA (internal auditors characteristics, IAD characteristics, and the IA role in ERM) and both the ERME and IAE in Jordanian PLCs.

(a): To investigate the relationship between internal auditors' characteristics and ERME.

(b): To investigate the relationship between internal auditors' characteristics and IAE.

(c): To investigate the relationship between IAD characteristics and ERME.

(d): To investigate the relationship between IAD characteristics and IAE.

(e): To investigate the relationship between the IA role in ERM and ERME.

(f): To investigate the relationship between the IA role in ERM and IAE.

RO2: To investigate the relationship between IAE and ERME in Jordanian PLCs.

RO3: To investigate the IAE mediation effect between IA (internal auditors characteristics, IAD characteristics, and the IA role in ERM) and ERME relationship in Jordanian PLCs.

(a): To investigate the IAE mediation effect between internal auditors characteristics and ERME relationship.

(b): To investigate the IAE mediation effect between IAD characteristics and ERME relationship.

(c): To investigate the IAE mediation effect between the IA role in ERM and ERME relationship.

RO4: To investigate the moderating role of OSC on the relationship between IAE and ERME in Jordanian PLCs.

RO5: To investigate the moderating role of OC on the relationship between IAE and ERME in Jordanian PLCs.

1.6 Significance of the Study

The section discusses the research significance from various perspectives, including practical significance, theoretical and methodological significance, and the overall significance to the existing body of knowledge.

1.6.1 Practical

A practical standpoint, this study holds significant importance as it raises awareness among PLCs in the Middle East, specifically in Jordan. By highlighting the importance and challenges of ERM, it aims to motivate companies to implement and enhance its effectiveness, ensuring economic growth in unpredictable environments. Additionally, this study provides a cost-effective solution to enhance ERM through the IA function in Jordanian PLCs. The findings of this study are significant for PLCs practitioners and decision-makers, including the BOD, Audit Committee (AC), heads of IA, and internal auditors, emphasizing the IA function's importance as a valuable internal resource for enhancing ERM in their companies. Specifically, the study provides a comprehensive understanding of how the characteristics of internal auditors, IAD, and the role of IA in ERM enhance ERME in Jordanian PLCs. Furthermore, this study highlights how the IAE, OSC, and OC affect the relationship between IA and ERME. Practitioners and decision-makers can utilize this knowledge to promote collaboration and coordination between the IA and ERM functions, ultimately leading to more effective outcomes.

Moreover, the results of this study may be beneficial to regulators and policymakers, such as the Jordan Securities Commission (JSC), Securities Depository Center (SDC), ASE, and CBJ, to emphasize and strengthen the importance of ERM and IA and their effectiveness on companies' performance, survival, and sustainability, enhancing the overall economy of Jordan. The findings of this study can motivate regulators and policymakers to expand their roles in evaluating and ensuring the effectiveness of both ERM and IA in Jordanian PLCs. The findings of this study may change the perspective of regulators and policymakers, leading them to mandate and incentivize companies to implement effective ERM and IA practices. The information and findings provide important determinants for IA, such as internal auditors' characteristics, IAD characteristics, and the role of IA in ERM, which could be included in regulatory policies to ensure that the function adds value, is effective, and enhances ERME. Finally, the findings highlight the importance of OSC and OC in shaping the relationship between IAE and ERME. Regulators and policymakers can consider implementing policies or recommendations to address OSC and enhance OC to promote effective RM, the role of IA, and the relationship between IA and ERM in Jordanian PLCs.

1.6.2 Theoretical and Methodological

From a theoretical perspective, this study aims to construct a comprehensive research framework that integrates various areas of literature, including IA characteristics and role, IAE, OSC, OC, and ERME. Previous studies have overlooked the combined influence of these factors on ERME, thus necessitating a framework that elucidates their interrelationships. Furthermore, this study recognizes the theoretical significance of incorporating the RBV and agency theories to establish a linkage within the proposed framework. Previous research has neglected the utilization of these theories, particularly in understanding the relationship between IA and ERM. By integrating these theories, this study explores how they complement and enrich each other, shedding light on their unique contributions and perspectives in understanding the complex dynamics of the IA-ERME relationship. This expansion of theory application offers valuable theoretical insights into how resources, agency relationships, and decision-making processes collectively shape ERME. The findings of this study hold implications for the further advancement of the RBV theory and agency theory. By emphasizing their interconnections and identifying potential areas for refinement, this research lays the groundwork for future theoretical developments.

Furthermore, this study holds significant methodological importance; one key aspect is the use of census sampling, which involves including the entire population of Jordanian PLCs from different sectors, such as financial, service, and industrial. By utilizing census sampling, the study aims to enhance the generalizability of the findings, as it avoids potential biases that may arise from focusing on a single sector or relying on smaller samples. Another crucial methodological aspect is the development of a comprehensive standardized questionnaire, which is drawn through an extensive literature review and adopting and adapting existing questionnaires from other studies. This ensures the collection of data for all variables consistently and reliably. Furthermore, the study employs quantitative data analysis techniques and advanced software tools that strengthen the study. The Statistical Package for the Social Sciences (SPSS) is utilized for data cleaning, preparation, and basic descriptive statistics. This step ensures the accuracy and integrity of the data. In addition, the study utilizes SmartPLS, a sophisticated software tool, to test the relationships among variables. SmartPLS is specifically chosen for its ability to handle complex models and relationships, making it suitable for advanced research. By employing this software, the study aims to provide a robust analysis that captures the intricate dynamics of the research framework. Overall, the methodological significance of this study lies in its comprehensive approach to sampling, the development of a standardized questionnaire, and the utilization of advanced software tools for data analysis. These methodological choices enhance the validity, generalizability, and reliability of the study's findings, thereby contributing to the broader knowledge base in the field.

1.6.3 Body of Knowledge

The present study holds significant implications, particularly in the field of IA and ERM. Firstly, this study provides up-to-date insights into the characteristics of internal auditors, IAD characteristics, the role of IA in ERM, IAE, ERME, OSC, and OC status within Jordanian PLCs. As this information is unavailable to the public, this study becomes a valuable source of new and relevant knowledge in this field. Secondly, this study addresses the scarcity in the literature concerning ERM, specifically focusing on the aspect of ERME within the context of a developing country like Jordan. Previous research has primarily focused on the effects of ERM on company performance and its advantages rather than on enhancing ERME itself. Thirdly, this study responds to the calls made by the IIA and researchers to conduct research specifically focused on the involvement of IA in ERM. The importance of internal auditors in ERM processes has been recognized, and there is a growing demand for empirical studies that explore their roles and contributions in this context. This study represents a cost-effective solution to enhance ERME in companies by leveraging IA as a valuable internal resource. Fourthly, this study introduces a novel conceptual framework incorporating IA characteristics and roles, IAE, OSC, OC, and ERME. By integrating these variables within a single framework, the study offers a comprehensive and holistic approach to understanding the relationships and dynamics among these key factors and ERME. Overall, this study offers a deeper understanding of how IA and its specific factors, OSC, and OC interact to enhance ERME in companies.

1.7 Study Scope

This study focuses on Jordan, a developing country in the Middle East that shares similar language, culture, and geopolitical conditions with other countries in the region. Jordan is a small country with an area of 92,342 square kilometers, a population density of 11 million people, and it is a country with limited resources. Nonetheless, Jordan is regarded as an excellent investment destination due to its safety and security, political stability, and prominent location in the Middle East. Specifically, this study focuses on the PLCs in the ASE market, which includes 170 PLCs divided into three main sectors as categorized by the ASE classification: financial, service, and industrial. This study selected Jordanian PLCs for several reasons. Firstly, Jordanian PLCs are significant contributors to the country's economy and represent the most prominent companies in Jordan. They make substantial contributions to the GDP, with the market value of their listed shares accounting for 49.9% and 56% of Jordanian GDP in 2021 and 2022, respectively (ASE, 2021a, 2022a). Secondly, Jordanian PLCs have a closer integration with IA and ERM than small and medium-sized companies. The separation of ownership and management roles is more distinct in PLCs, and their corporate culture is often more sophisticated due to their large size and complex operations and activities. Therefore, the sustainability of Jordanian PLCs is crucial for them to continue playing a significant role in the growth of the Jordanian economy.

The ineffectiveness of ERM has exposed Jordanian PLCs to various risks, posing threats to their performance, sustainability, and survival. Consequently, Jordanian PLCs should prioritize the enhancement of their ERME. This study offers a comprehensive and cost-effective solution to improve ERME within these companies, utilizing internal resources. Specifically, the study focuses on four major areas. The first area is IA, which encompasses internal auditor characteristics, IAD characteristics, the IA role in ERM, and IAE. The second area is ERM, with particular emphasis on the widely recognized COSO 2004 ERM framework. The third area is OSC, primarily examining the concentration of ownership and its potential moderating effect on the relationship between IAE and ERME. The fourth area is OC, which aims to explore its potential moderating effect on the relationship between IAE and ERME.

Moreover, the study framework is constructed based on previous literature and theories, namely RBV and agency theories. The study targets respondents in the IAD, including the head of IA, team leader, and senior auditor, due to their critical roles and knowledge of the company's audit plans and ERM process. This organizational study targets one respondent from each company to capture a broad understanding of practices and viewpoints across multiple companies. Finally, this study utilizes a quantitative approach to data collection and analysis. Data collection is based on a well-developed comprehensive questionnaire that includes all the study variables. Data analysis uses SPSS for data cleaning, preparation, and basic descriptive statistics. SmartPLS is used to test the relationships among variables, as it can handle complex models and relationships, making it suitable for advanced research.

1.8 Key Terms Definition

The subsequent definitions aim to offer a comprehensive comprehension of significant terms within the framework of this study:

Internal Audit: is defined as "an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes" (IIA, 2023:1).

Internal Audit Department/Internal Auditor: is defined as "a department, division, team of consultants, or other practitioner(s) that provides independent, objective assurance and consulting services designed to add value and improve an organization's operations" (IIA, 2017:23).

Internal Audit Characteristics: are defined as the distinctive qualities and attributes demonstrated by internal auditors and IAD, such as their objectivity, competencies, and relationships with others. These traits significantly influence the effectiveness and efficiency of IA activities within a company (Endaya & Hanefah, 2016).

Internal Audit Role in Enterprise Risk Management: refers to the involvement of internal auditors in providing assurance and consulting services to enhance the effectiveness of ERM processes within a company (Kertali & Tahajuddin, 2018; Mardessi & Arab, 2018b).

Internal Audit Effectiveness: is defined as the extent to which internal audits achieve their goals and objectives, resulting in improved organizational performance and contributing to the overall effectiveness and efficiency of governance, RM, and control processes (Poltak et al., 2019).

Ownership Structure: refers to the overall composition and distribution of ownership rights within a company, including the identity and proportion of shareholders or owners, and the control and decision-making power associated with different ownership types (Saleh et al., 2017).

Ownership Structure Concentration: refers to the extent to which ownership of a company's shares or equity is held by a limited number of individuals, institutions, or entities (Shahrier et al., 2020).

Organizational Culture: is defined as the shared values, beliefs, and norms that shape the behaviors and attitudes of individuals within a company (Ahmady et al., 2016).

Enterprise Risk Management: is defined as "a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives" (COSO, 2004:2).

Enterprise Risk Management Effectiveness: refers to the degree to which the implementation and execution of ERM practices and processes contribute to achieving the company's strategic, operations, reporting, and compliance objectives (Togok, 2016).

1.9 Thesis Organization

The thesis is structured into seven chapters, which are concisely outlined as follows:

Chapter 1 introduces the research with an introduction, background, and problem statement. It then outlines research questions and objectives, explains the significance and scope of the study, defines key terms, describes the thesis organization, and concludes with a summary.

Chapter 2 provides a thorough literature review of the study variables. It begins with background information and a review of literature related to ERM and IA, and then expands to cover existing literature on OSC and OC. The chapter identifies gaps in prior research and areas for further investigation before concluding with a summary.

Chapter 3 offers a concise background on the study's context, starting with an overview of Jordan as a developing country. It then provides brief information on the Jordanian economy, capital market, and CG codes and instructions for PLCs. The chapter then presents background details on ERM, IA, OSC, and OC within the Jordanian context, concluding with a summary section.

Chapter 4 introduces the theoretical foundation, hypotheses development, and research framework. It starts with a section on theories, incorporating RBV theory and agency theory. The chapter then details the development of hypotheses and presents the research framework illustrating the relationships between variables. A summary section concludes the chapter.

Chapter 5 explores the research methodology employed in the study. It starts by outlining the research philosophy and design; followed by details on data collection methods, research population, sample, and the development of the questionnaire along with data collection procedures. The chapter further covers the definition and measurement of variables, including control variables. It also discusses the testing of the questionnaire and the data analysis process. A summary section concludes the chapter.

Chapter 6 presents an in-depth analysis of the collected data, following the study's methodology to rigorously test its hypotheses and effectively achieve the research objectives. The chapter begins by discussing the questionnaire response rate and data examination before delving into the primary analysis. It then provides demographic data of the study's respondents and their respective companies, along with descriptive statistics for the study variables, factors, and items. Subsequently, the chapter delves into the primary analysis, which includes evaluating the measurement model, assessing the structural model, conducting mediation and moderation analyses, and analyzing control variables. Finally, the chapter ends with sections summarizing the results of hypothesis testing and providing an overall summary.

Chapter 7 presents a discussion of the findings and concludes the overall study. The chapter begins with a summary of the findings. It then proceeds to discuss the study's findings in alignment with the research objectives. Subsequently, the chapter provides a detailed conclusion. Following that, this chapter outlines the contributions of the study. Finally, the chapter ends with sections on limitations and recommendations for future research.

1.10 Summary

The chapter offered a comprehensive overview of the entire study. It commenced with the introduction and background sections. The chapter then proceeded to present a problem statement that identified the issues surrounding ERME in Jordanian PLCs. Based on the problem statement, this study's research questions and research objectives were developed. The chapter further discussed the significance of the study from different perspectives, including practical, theoretical, and methodological significance, as well as its significance to existing knowledge. The scope of the study was briefly described. Furthermore, the chapter provided definitions of key terms used throughout the study and thesis organization. Finally, this chapter ended with this section as a brief summary.

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