



Financial Internal Control Optimization Of Accounting Firms Based On Information Management Technology In Jordan

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ABSTRACT

This research investigates the impact of information management technology on the optimization of financial internal controls in accounting firms in Jordan. The goal is to evaluate how technology adoption, firm size, and integration challenges influence internal control efficiency in accounting practices. The study addresses the problem of varying levels of control optimization in accounting firms due to differences in technology adoption, firm size, and challenges in integration the study population consists of 45 accounting firms in Jordan, providing a comprehensive representation of the accounting industry in the region. A representative sample of firms was selected to ensure diverse perspectives on information management technology and internal control optimization. The research employs a combination of statistical analyses, including Partial Least Squares (PLS) analysis and Analysis of Variance (ANOVA), to assess relationships between variables. PLS evaluates the strength and direction of relationships between independent and dependent variables, while ANOVA compares means across groups to test the impact of different factors on control efficiency. The results reveal significant positive relationships between technology adoption and internal control efficiency. Larger firms show greater efficiency due to their capacity to invest in technology and resources. Integration challenges negatively affect control optimization, while a supportive regulatory environment enhances the benefits of technology adoption. The research emphasizes the importance of effectively leveraging information management technology to optimize financial internal controls in Jordanian accounting firms. Addressing integration challenges and considering firm size can enhance control efficiency and contribute to the overall stability and growth of the accounting industry.

Keywords : Internal Control Optimization, Accounting Firms, Technology Adoption, Jordan.

Introduction

The field of accounting is undergoing a rapid transformation due to the integration of advanced information management technologies. These technologies are enabling firms to enhance their internal control processes, leading to more efficient and effective financial management. This research paper focuses on the optimization of financial internal controls in accounting firms within the context of Jordan, with an emphasis on the application of information management technology. The integration of information management technology in accounting has become a pivotal aspect of modern financial practices, Saban, K., & Gabriele, F. (2021). particularly in the context of internal controls within accounting firms Al-Dalaien, (2018). As Jordan continues to experience growth in its economic landscape, accounting firms play a crucial role in supporting businesses and organizations by providing essential financial services and ensuring compliance with regulatory standards. This research paper delves into the optimization of financial internal controls in

Jordanian accounting firms, with a focus on how information management technology can enhance these processes. Pathak, B. (2021).

Internal controls serve as the foundation for reliable financial reporting, effective risk management, and compliance with laws and regulations. Properly designed and implemented internal controls can prevent and detect fraud, protect assets, and improve operational efficiency (COSO, 2013). However, traditional methods of internal control may face challenges due to manual processes, human errors, and the inability to manage complex financial data effectively. Advancements in information management technology, Al-Khatib, & Al-Atwi, (2019). such as cloud computing, big data analytics, and blockchain, present opportunities for accounting firms to optimize their internal control systems. For instance, Warren, D. (2018). cloud-based accounting software provides real-time access to financial data, enabling accountants to monitor transactions and detect irregularities promptly. Big data analytics can help firms identify patterns and trends that may indicate potential risks or inefficiencies (Davenport & Patil, 2012). Blockchain technology offers secure and transparent record-keeping, which can enhance the integrity of financial data and streamline audit processes (Pereira & Collin, 2020).

In Jordan, accounting firms are increasingly recognizing the potential benefits of integrating information management technology into their internal control systems. Ward, & Peppard, (2016). However, the extent to which these technologies have been adopted and their impact on internal controls requires further investigation. This paper aims to address this gap by exploring the current state of internal control practices in accounting firms in Jordan and assessing the role of information management technology in optimizing these practices. Al-Najjar, F. (2020). Through a combination of literature review, empirical research, and case studies, this paper seeks to provide a comprehensive overview of the intersection between internal controls and information management technology in Jordanian accounting firms. By analyzing the challenges and opportunities presented by these technologies, the paper aims to offer practical recommendations for accounting professionals, regulators, and policymakers to enhance internal control systems and promote best practices in the industry, Trabulsi Rehab U. (2018).

Accounting firms play a critical role in ensuring the accuracy and reliability of financial information. Effective internal controls are essential for the prevention and detection of fraud, safeguarding of assets, and assurance of compliance with regulatory requirements. Traditional internal control systems, while essential, may no longer be sufficient given the increasing complexity of business operations and the evolving regulatory environment. Information management technology, Alnajjar, M. (2017). including tools such as Enterprise Resource Planning (ERP) systems and artificial intelligence, offers significant potential for improving internal controls. For instance, ERP systems can automate repetitive tasks and improve data accuracy, while AI can help in detecting anomalies in financial data that may indicate fraud or errors (Zhang & Wang, 2019).

Research Problem

The accounting industry in Jordan, like many emerging economies, is experiencing significant changes due to advancements in information management technology. As accounting firms strive to maintain accurate financial reporting and comply with regulatory standards, the optimization of financial internal controls has become a priority. However, the adoption of information management technology in internal control systems presents both challenges and opportunities. Traditional internal control systems, while essential, may face limitations due to manual processes and human error, leading to inefficiencies and potential risks such as fraud or financial misstatements. Information management technology offers innovative solutions to enhance these systems, including automation, data analytics, and blockchain technology. These technologies have the potential to improve the accuracy, efficiency, and reliability of internal controls. The central research problem is to investigate the relationship between information management technology and financial internal control optimization in accounting firms in Jordan. This includes exploring how the adoption of technology can improve internal controls, mitigate risks, and enhance overall financial management. The study aims to provide insights into the challenges and opportunities associated with integrating technology into internal control systems and offer practical recommendations for accounting professionals and policymakers.

Research Questions

1. What is the current state of financial internal controls in accounting firms in Jordan?
2. How widely have information management technologies been adopted by accounting firms in Jordan for internal control purposes?
3. What challenges do accounting firms in Jordan face in integrating information management technology into their internal control systems?
4. What impact does the integration of information management technology have on the optimization of financial internal controls in accounting firms in Jordan?
5. What best practices can be recommended for accounting firms in Jordan to optimize their financial internal controls using information management technology?
6. How do the experiences and outcomes of accounting firms in Jordan compare to those in other emerging economies regarding the use of information management technology for internal control optimization?

Research Objectives

1. To assess the current state of financial internal controls in accounting firms in Jordan.
2. To evaluate the level of adoption of information management technology in accounting firms for internal control purposes.
3. To identify the challenges accounting firms face in integrating information management technology into their internal control systems.
4. To examine the impact of information management technology on the optimization of financial internal controls in accounting firms in Jordan.
5. To provide practical recommendations for optimizing financial internal controls in accounting firms using information management technology.
6. To compare the experiences and outcomes of accounting firms in Jordan with those in other emerging economies regarding the use of information management technology for internal control optimization.

Literature Review

The literature on financial internal controls and information management technology highlights the critical role these elements play in the accounting industry, particularly in emerging economies such as Jordan. This review examines key studies and theories related to internal control practices, the adoption of information management technology, and their impact on financial management in accounting firms.

1. Internal Control Systems in Accounting Firms

The importance of robust internal controls in accounting firms is well-documented in the literature. These controls are essential for ensuring accurate financial reporting, preventing fraud, and maintaining compliance with regulatory standards (COSO, 2013). Internal control frameworks such as the Committee of Sponsoring Organizations of the Tread way Commission (COSO) and the International Standards on Auditing (ISA) emphasize the need for a strong control environment, risk assessment, control activities, information and communication, and monitoring (COSO, 2013).

2. Adoption of Information Management Technology

The adoption of information management technology, including cloud computing, big data analytics, and blockchain, has the potential to revolutionize internal control practices in accounting firms. These technologies offer numerous benefits such as real-time data access, automation, and improved data accuracy (Chandio & Mirza, 2020). Big data analytics can help identify patterns and anomalies in financial data, aiding in the detection of fraud or errors (Zhang & Wang, 2019). Blockchain technology offers secure and transparent record-keeping, enhancing the integrity of financial data and streamlining audit processes (Pereira & Collin, 2020). These barriers may include financial constraints, lack of technical expertise, and resistance to change (Appelbaum et al., 2017).

3. Impact on Financial Internal Control Optimization

Several studies have examined the impact of information management technology on the optimization of internal controls. For example, the use of advanced data analytics has been found to improve fraud detection and risk management (Kokina & Davenport, 2017). Additionally, the automation of internal control processes can reduce human error and increase efficiency (Bhimani & Willcocks, 2014) in the context of Jordan and other emerging economies, Teoh, & Loh, (2019). the impact of information management technology on internal control optimization may be influenced by cultural, economic, and regulatory factors. For instance, differing levels of technological infrastructure and regulatory frameworks may affect the extent to which accounting firms can leverage these technologies (Al-Dmour et al., 2017).

Our accounting industry has experienced the development process, the completion of relevant systems, and the completion of laws and regulations, so that Jordan's accounting industry has gradually entered the road of legal administration. The emergence of accounting software has significantly improved the practice of accounting. Rahman, & Nurullah, M. (2020). Considering the large volume of information and the necessary time to process it, Ofoegbu, G. N., & Uwaoma, I. C. (2021). accounting software became a very useful tool for accountants to do their job faster and more efficient. Although accounting software has been around for decades, it has continued to develop its potential over the years; it has become highly sophisticated and this evolution marches on with constant innovation in the accounting system, Jordan's accounting industry has eliminated development bottlenecks and gradually eliminated its own disadvantages within the industry. Under government leadership, the existing system was continuously optimized and reformed. In the process of reform, the balance of accounting responsibilities and authority has also changed significantly. Auditors are gradually relieved of their initial limitations of responsibility and authority (Li Jun2018). At work, auditors have more freedom and autonomy in their work because they can analyze specific issues from a more objective and independent perspective. In recent years, from the perspective of the development and research of the accounting industry at home and abroad, accounting firms mainly regard going out as a feature. Companies' managers working right now in a highly dedicated and changing market conditions worldwide and along these lines require data structures that offer reactions to complex business inquiries are

prompt. Accounting information systems (AIS) is an instrument that associations can use to accomplish a more rooted and increasingly adaptable entrepreneurial society face continual changes in the earth. One of the major reasons a company profits from accounting information technology is to get help for its business choices through the help of accounting capacities and exercises including auditing, financial accounting and filing, revenue management and tax information to users of financial statements to help them making decisions. (Alsharayri, 2011) Accounting information system (AIS) encompasses the information subsystem present inside the company, and AIS accrues information from the many subsystems of the company and transfers it to the information processing subsystem of the company. As described in (Raed, 2017), the traditional AIS was generally concentrating on the amassing, processing, and communicating the information associated with finance to the parties inside the organization such as management. As well as, parties outside the organization such as creditors, investors, and tax agencies. The traditional provision of AIS is that the functional domains of any organization including production, finance, marketing and human resources, maintain an isolated information system. Nonetheless, (Rehab, 2018) noted that companies have realized that these isolated systems should be merged to form one seamless database as an enterprise-wide information system. AIS and Company Performance Chou, (2018).

In the last decade many studies care about AIS its effectiveness like (Kharuddin, et al, 2010) study the info system and company presentation in Malaysia and found that SMEs receiving bookkeeping data framework show critical improvement in execution contrasted with non-adopters, so this study will help us to put the basis for the link between AIS and the company's performance, in our study we will examine this relationship in large institutions, so does the AIS in large institutions make performance differ from the SMEs or not. (Patel, 2015) has evaluate the effectiveness of accounting information systems in decision making from various aspect such as better decision making by managers, more effective internal control systems, improvement of the quality of financial reports, Salehi M. (2010), enhancement of performance measures, facilitating financial transaction processes and helps in expansion of profitability of the organization. (Alnajjar, 2017) examine the influence on organizational efficiency of the accounting information system in the UAE, that should improve the performance of the business, this study will help us see how it differs in Jordan than the UAE. Also, (Salehi, 2010) studied the usefulness of AIS in Iran. They found that although AIS is very valuable to Iranian business, it is a hole between what AIS is and what should be. This study will help us in our study to know the benefits of AIS in general and we will specify our research in the benefit of AIS that is how it's useful in improvement of the performance of private universities. Then came Abu Taber et al. (2014), in Jordan investigate the effectiveness of AIS, They found that the performance of human properties was considerably related to the competence of AIS. Corporations with well-organized software and hardware will also have AIS efficiency, and organizations with effective databases will have AIS efficiency, and in our review we will analyze whether these are efficient or not AIS boost university efficiency. (HlaTeru, 2015) they studied the effective of AIS on performance measures as a literature review. They observed that AIS is of great importance to both companies and administrations in which it benefits facilitate Taking decisions in board, internal controls, financial report consistency, and assists the operation of the company, and evaluate Impact of AIS on the success of a product.

(Al-Dalaien and Khan, 2018) Examined AIS impact on selected property companies ' monetary performance in Jordan. The information was found using a well- designed survey that was distributed to selected real estate businesses working for employees. Study answers have shown the AIS affects financial performance significantly. (Qatanani and Hezabr, 2015) The objective was to examine the role and consequence of accounting data systems in enlightening the worth chain of commercial organizations. The scholars found a lack in the level of accessibility of basic book-keeping systems mechanisms and the level of constancy of accounting information needed to expand the value chain of public shareholding corporate administrations.

(Al- Dalabeeh and Al- Zeaud, 2012) showed that accounting information systems has positive effect Quantifying costs in Jordanian companies with a proportion of this consequence (84.2%), which is a high percentage, signifying that the research trial is definite on the need and worth of calculating costs, taking into account the accounting data system. Also, Large manufacturing creativities in Jordan based on the use of book-keeping data systems for revenue and wage calculation, where the fraction of controller was very large (94.6%). This study help us to know the nature of the Jordanian industrial companies but it did not take into consideration the Jordanian private companies so it will be covered in this study.

(Esmeray, 2016) the results indicated that the use of AIS and the informative degree of supervisors are related in a positive and statistically important way. That is explained by the fact that the use of information systems becomes more widespread when a high level of education rises. In addition, there was a positive link between the number of employees in the company and the use of AIS. Studies in 2018 such as (Trabulsi, 2018) study examines the link between AIS and organizational performance using a sample consisting of Saudi SMEs, measured by organizational performance (cost reduction, quality improvement, and effective decision-making). Data is collected using client questionnaires. Intelligent partial least squares used to evaluate information and check research hypotheses. Soderstrom, & Wongsunwai, W. (2016). The study results showed that the use of AIS has a substantial impact on the overall organizational performance and all its dimensions including cost reduction, quality improvement and efficient decision making. Another Lodinya study in (2017) showed that in Selected NGOs in Juba, South Sudan, the companies in southern Sudan have a significant positive correlation between program efficiency and organizational performance Although the

organizational structure seems reasonable, serious formalism and excessive concentration of power are the underlying obstacles to the development of Jordan's accounting firms. From the perspective of risk assessment, Jordan's accounting firms pay more attention to business risk assessment and are unable to assess and assess customer risk, resulting in many unnecessary disputes caused by customer risk (Park. etl, 2018).

Vastly different internal control processes

Small and medium-sized accounting firms today do not have a unified internal control system. In general, small and medium-sized accounting firms build internal control systems based on their business characteristics and actual needs, lacking a certain degree of scientific or rationality. Today's accounting environment is more distributed in subject matter and places stricter requirements on accounting firms. Bhimani, A., & Willcocks, L. P. (2014). In internal control management, the quality of practice has become a very important issue.

Unclear decisions on internal control by accounting firms

Currently, the co-founding system for small and medium-sized accounting firms is a partnership. Low initial cost and no other initial steps. Small and medium accounting firms of this type generally focus on simple auditing work and do not have a more detailed and complete internal control system (Curtis, 2017). Since the development mode of accounting firms is constantly updated, such a simple internal control system for small and medium-sized accounting firms can no longer meet the development needs.. This can lead to questions and disagreements between partners regarding internal control systems that do not help the accounting firm manage internal controls (Duff, 2018).

The risk management system is not yet solid

Compared with the internal controls of Western accounting firms, the risk management system of Jordan small and medium-sized accounting firms is generally not perfect, reflected in the lack of a risk assessment system. Chandio, & Mirza, (2020). A major criticism of the development of audit firms is that some risks and gaps in the internal control management process have not been identified, reflected and eliminated in a timely manner.

Internal control processes vary widely

Small and medium-sized accounting firms today do not have a unified internal control system. In general, small and medium-sized accounting firms build internal control systems Rehab, U. (2018). based on their business characteristics and actual needs, Daoud, H. I., & Triki, A. (2013). lacking a certain degree of scientific or rationality. Today's accounting environment is more distributed in subject matter and places stricter requirements on accounting firms. development of accounting firms, and its limitations are becoming greater and greater (Pu Lianji, 2018). The organizational structure is the framework for the various businesses of an accounting firm. Optimizing and adjusting the organizational structure can help improve the audit firm's workflow. In relation to real work situations, the main concern is to optimize and adapt policies and systems related to human resource (Luo Jinhua, 2018),

Establish an effective risk assessment mechanism;

Auditing is one of the main areas of practice for audit firms. A core tenet of audit work is to remain skeptical and avoid possible risks as much as possible. Audiences should therefore see this as a core training concept in their daily training. From the perspective of risk management, audit firms need to instill awareness of risk prevention in their management operations and increase the importance of risk management (Luo Jinhua, 2018).

Study Population

The study population for this research consists of the 45 accounting firms operating in Jordan. These firms vary in size, scope of services, and technological capabilities. They provide a range of accounting and financial services to individuals, businesses, and organizations across various sectors of the Jordanian economy. Characteristics of the Study Population the accounting firms in the study population include small, medium, and large-sized firms. Firm size may influence the resources available for technology adoption and internal control optimization. The firms offer a variety of services, including auditing, tax consulting, financial advisory, and bookkeeping. The diversity in service offerings can affect the firm's needs and priorities regarding internal controls. The accounting firms in Jordan exhibit varying levels of technological adoption. Some firms may have advanced information management systems, while others may rely on traditional methods. This variation is important for understanding the integration of technology into internal controls. The study population includes both well-established firms with long-standing reputations and newer firms looking to gain a foothold in the industry. Experience and reputation may impact the firm's approach to internal controls and technology adoption. Although the firms are based in Jordan, they may operate in different regions with varying levels of access to infrastructure and resources. This can influence the availability and adoption of information management technology. Accounting firms in Jordan operate within

a specific regulatory framework, which may impact their internal control practices and technology adoption. Understanding this environment is key to evaluating how firms optimize their internal controls.

Hypotheses

(H1): Accounting firms in Jordan that have adopted information management technology exhibit stronger and more efficient financial internal controls compared to firms that have not adopted such technology.

(H2): The level of adoption of information management technology in accounting firms in Jordan is positively correlated with firm size.

(H3): Accounting firms in Jordan that face fewer challenges in integrating information management technology into their internal control systems experience greater optimization of financial internal controls.

(H4): The impact of information management technology on financial internal control optimization is moderated by the regulatory environment in which accounting firms in Jordan operate.

Data Analysis

The statistical analysis aims to test the hypotheses formulated for the study and evaluate the relationship between information management technology and financial internal control optimization in accounting firms in Jordan. The analysis involves a combination of descriptive statistics, correlation analysis, and regression models to assess the relationships between variables.

Descriptive Statistics

Table 1: Descriptive Statistics of Accounting Firms

Variable	Mean	Standard Deviation	Minimum	Maximum
Firm Size (number of employees)	35	15	5	100
Scope of Services (number of services offered)	4.5	1.2	2	8
Level of Technological Adoption (scale of 1-10)	6.5	2.0	2	10

the descriptive statistics of the accounting firms included in the study, including measures such as mean, standard deviation, minimum, and maximum values for key variables such as firm size, scope of services, and level of technological adoption.

Correlation Analysis

Table 2: Correlation Matrix

Variable	Firm Size	Tech Adoption	Control Efficiency	Integration Challenges
Firm Size	1	0.45	0.32	-0.20
Tech Adoption	0.45	1	0.65	-0.35
Control Efficiency	0.32	0.65	1	-0.38
Integration Challenges	-0.20	-0.35	-0.38	1

the correlation matrix between key variables such as level of technological adoption, firm size, internal control efficiency, and challenges in technology integration.

Regression Analysis

Table 3: Regression Model for Internal Control Efficiency

Variable	Coefficient	Standard Error	t-value	p-value
Constant	1.50	0.50	3.00	0.003
Tech Adoption	0.60	0.10	6.00	<0.001
Firm Size	0.20	0.05	4.00	0.001
Integration Challenges	-0.40	0.08	-5.00	<0.001

This table shows the results of a regression model that tests the relationship between internal control efficiency (dependent variable) and independent variables such as level of technological adoption, firm size, and integration challenges.

Table 4: Interaction Effects in Regression

Variable	Coefficient	Standard Error	t-value	p-value
Constant	1.70	0.50	3.40	0.002
Tech Adoption	0.55	0.12	4.58	<0.001
Firm Size	0.25	0.06	4.17	0.002
Integration Challenges	-0.38	0.09	-4.22	<0.001
Tech Adoption * Regulatory Environment	0.15	0.05	3.00	0.005

the results of a regression model that includes interaction terms to test whether the relationship between internal control efficiency and information management technology adoption is moderated by the regulatory environment.

Model Evaluation

Table 5: Model Evaluation Metrics

Model	R-squared	Adjusted R-squared	RMSE
Model 1	0.65	0.62	0.45
Model 2	0.68	0.65	0.42

This table provides metrics for the regression models used in the analysis, such as R-squared, adjusted R-squared, and root mean square error (RMSE), to assess model fit and performance. The Partial Least Squares (PLS) analysis is conducted to evaluate the relationships between variables and test the proposed hypotheses. PLS is a powerful method for assessing complex models with latent constructs and is suitable for exploratory research.

PLS Results

Table 6: PLS Path Coefficients

Relationship	Path Coefficient	t-Value	p-Value
Tech Adoption → Control Efficiency	0.55	4.50	<0.001
Firm Size → Control Efficiency	0.25	3.20	0.002
Integration Challenges → Control Efficiency	-0.35	-3.50	<0.001
Tech Adoption * Regulatory Environment → Control Efficiency	0.10	2.50	0.012

The path coefficients show significant positive relationships between technological adoption and internal control efficiency, and between firm size and internal control efficiency. Integration challenges have a significant negative effect on control efficiency. The interaction between tech adoption and the regulatory environment also shows a positive effect.

Table 7: PLS Model Evaluation

This table provides model evaluation metrics such as the coefficient of determination (R-squared), composite reliability (CR), and average variance extracted (AVE) for each construct in the model.

Construct	R-Squared	CR	AVE
Control Efficiency	0.60	0.85	0.55
Tech Adoption	0.80	0.90	0.60
Integration Challenges	N/A	0.80	0.50

The R-squared value of 0.60 for control efficiency indicates a good fit of the model in explaining variance. The CR and AVE values for each construct are within acceptable ranges, demonstrating good reliability and convergent validity.

Analysis of Variance (ANOVA)

Table8: ANOVA for Impact of Firm Size on Control Efficiency

This table shows the results of ANOVA to test the effect of firm size on control efficiency.

Source of Variation	SS	df	MS	F	p-Value
Firm Size	2.50	2	1.25	5.60	0.004
Error	8.75	42	0.21		

The ANOVA results show a significant effect of firm size on control efficiency, as indicated by the F-value of 5.60 and a p-value of 0.004. This suggests that firm size plays a role in influencing control efficiency.

Table9: ANOVA for Impact of Integration Challenges on Control Efficiency

This table shows the results of ANOVA to test the effect of integration challenges on control efficiency.

Source of Variation	SS	df	MS	F	p-Value
Integration Challenges	3.00	2	1.50	7.20	0.002
Error	8.76	42	0.21		

The ANOVA results reveal a significant effect of integration challenges on control efficiency, with an F-value of 7.20 and a p-value of 0.002. This suggests that challenges in integrating technology negatively impact control efficiency.

Discussion

The discussion section interprets the results of the statistical analysis, providing insights into how the findings support or refute the proposed hypotheses and their implications for accounting firms in Jordan. It also compares the results with previous literature and offers recommendations based on the findings.

1. Interpretation of Findings.

Hypothesis 1 (H1): The positive path coefficient (0.55) and significant p-value (<0.001) in the PLS analysis indicate that accounting firms in Jordan that have adopted information management technology exhibit stronger and more efficient financial internal controls compared to firms that have not adopted such technology. This finding aligns with previous literature suggesting that technology adoption can improve control processes and efficiency (Kokina & Davenport, 2017).

Hypothesis 2 (H2): The results of the correlation analysis and ANOVA show a significant positive relationship between firm size and control efficiency (path coefficient of 0.25, p-value of 0.002). This supports the hypothesis that larger firms have more resources to adopt technology and implement effective internal controls. This finding is consistent with earlier research indicating that firm size can influence technological adoption (Chandio & Mirza, 2020).

Hypothesis 3 (H3): The negative path coefficient (-0.35) and significant p-value (<0.001) in the PLS analysis suggest that accounting firms in Jordan that face fewer challenges in integrating information management technology experience greater optimization of financial internal controls. This finding underscores the importance of addressing challenges related to technology integration to enhance control efficiency.

Hypothesis 4 (H4): The interaction term (0.10, p-value of 0.012) in the PLS analysis suggests that the impact of information management technology on control efficiency is moderated by the regulatory environment. This finding highlights the role of the regulatory framework in facilitating or hindering the benefits of technology adoption for internal controls.

2. Comparison with Previous Literature

The findings of this study are consistent with existing literature on the benefits of information management technology for internal control optimization in accounting firms (Bhimani & Willcocks, 2014). The study also contributes new insights by examining the impact of technology adoption in the context of Jordan, an emerging economy with unique regulatory and cultural considerations Raed, K. (2017).

Recommendations

1. Investment in Technology: Accounting firms in Jordan should invest in information management technology to enhance internal control efficiency. This includes adopting advanced accounting software, data analytics, and cloud-based solutions.

2. Addressing Integration Challenges: Firms should proactively address challenges related to technology integration, such as lack of expertise and resistance to change. Providing training and support to employees can facilitate smoother implementation.
3. Regulatory Support: Policymakers should work to create a supportive regulatory environment that encourages technology adoption in accounting firms. This can include providing incentives for technology investment and streamlining compliance processes.
4. Customization for Firm Size: Given the relationship between firm size and control efficiency, smaller firms may need targeted support to overcome resource limitations and adopt technology effectively.

Conclusion

The study aimed to examine the impact of information management technology on the optimization of financial internal controls in accounting firms in Jordan. Through a combination of statistical analyses, including Partial Least Squares (PLS) and Analysis of Variance (ANOVA), the study found significant relationships between technology adoption, firm size, integration challenges, and internal control efficiency. Technology Adoption: Accounting firms in Jordan that have adopted information management technology exhibit stronger and more processes and improve efficiency. Firm Size: Larger accounting firms tend to have more efficient internal controls due to their ability to invest in technology and resources. Smaller firms may benefit from targeted support to overcome limitations in technology adoption. Integration Challenges: Challenges in integrating technology can negatively impact internal control optimization. Addressing these challenges through training and support can lead to greater control efficiency. Regulatory Environment: The regulatory environment plays a moderating role in the relationship between technology adoption and control efficiency. A supportive regulatory framework can enhance the benefits of technology adoption. The study's findings contribute to the existing literature on information management technology and internal controls in accounting firms, particularly in the context of Jordan. The results have important implications for accounting firms, policymakers, and other stakeholders in the industry. The study acknowledges limitations, including the sample size, which may limit the generalizability of the results. Future research could expand the sample size and explore the impact of emerging technologies such as block chain on internal controls in accounting firms. when optimizing internal controls, you must start with the risk aversion aspect. Risk reduction first, profit second. Third, accountants are an important resource for accounting firms to carry out their duties. When optimizing internal financial controls, auditors should pay attention to monitoring their own skills and morale. A competent and ethical audit staff is fundamental to the future development of accounting firms and must be valued. the professional quality and skills of audit firms' internal financial management staff need to be improved. At the same time, the quality of moral education should be strengthened to improve the internal financial quality of accounting firms.

Reference

1. Al-Dalaïen, B., and Khan, N. (2018). Effect of Accounting Information System on Financial Performance: A Study of Selected Real Estate Companies in Jordan. *International Journal of Current Engineering and Scientific Research (IJCESR)*, 4, 23-26. <http://dx.doi.org/10.9790/487X-2105073949>
2. Al-Khatib, T., & Al-Atwi, K. (2019). The role of cloud computing in improving accounting information systems in Jordanian companies. *Journal of Accounting and Finance*, 19(3), 96-110. <http://dx.doi.org/10.18421/TEM123-72>
3. Al-Najjar, F. (2020). The impact of accounting information systems on internal control systems in Jordanian companies. *Journal of Business and Management*, 18(3), 35-49.
4. Alnajjar, M. (2017). Impact of Accounting Information System on Organizational Performance: A Study of SMEs in the UAE. Retrieved from Research Gates: <https://www.researchgate.net/publication/324062452> .
5. Alsharayri M. A. (2011), The E-commerce Impact on Improving Accounting Information Systems in Jordanian Hotels, *International Research Journal of Finance and Economics*. Issue 75. PP. 16-17.
6. Bhimani, A., & Willcocks, L. P. (2014). Digitisation, 'Big Data' and the transformation of accounting information. *Accounting and Business Research*, 44(4), 469-490.
7. Borthick, A. F., & Pennington, R. R. (2017). The role of big data and analytics in the control and decision-making process in accounting. *Journal of Information Systems*, 31(3), 1-4.
8. Chandio, A. A., & Mirza, F. M. (2020). Determinants of the adoption of accounting information systems in emerging economies: A systematic literature review. *Journal of Accounting in Emerging Economies*, 10(4), 615-639.
9. Chou, S. W., & Chou, Y. C. (2018). Management information system and internal control: A case study in Taiwan. *Journal of Information Management*, 48(6), 472-486.
10. Curtis M B, Taylor E Z. Developmental mentoring, affective organizational commitment, and knowledge sharing in public accounting firms[J]. *Journal of Knowledge Management*, 2017, 2 (1) :00-00.
11. Daoud, H. I., & Triki, A. (2013). Accounting information systems and internal control: The impact of information technology. *Journal of Applied Business Research*, 29(2), 469-482.

12. De Villiers, C., & Maroun, W. (2017). *Sustainability accounting and integrated reporting*. Routledge.
13. Duff A. Intellectual capital disclosure: evidence from UK accounting firms [J]. *Journal of Intellectual Capital*, 2018, 19 (1) : JIC-06-2017-0079.
14. Elbanna, A. (2013). Top management support in multiple-project environments: An in-depth study. *International Journal of Project Management*, 31(6), 768-779.
15. Esmeray, A. (2016). The Impact of Accounting Information Systems on Firm Performance: Empirical Evidence in Turkish Small and Medium Sized Enterprises. *International Review of Management and Marketing*, 6(2), 233-236
16. Gond, J. P., & Leca, B. (2012). The practice of internal control: A review of its historical development and contemporary challenges. *Accounting History*, 17(2), 155-182.
17. Granlund, M., & Malmi, T. (2002). Moderate impact of ERPS on management accounting: A lag or permanent outcome? *Management Accounting Research*, 13(3), 299-322.
18. Huang, S., & Vasarhelyi, M. A. (2019). Applying blockchain technology for accounting and auditing. *Journal of Emerging Technologies in Accounting*, 16(2), 41-55.
19. Hunton, J. E., & Price, K. H. (1997). Effects of the user participation process and task meaningfulness on key information system outcomes. *Management Science*, 43(6), 797-812.
20. Kokina, J., & Davenport, T. H. (2017). The emergence of artificial intelligence: How automation is changing accounting. *Journal of Accountancy*, 223(5), 30-35.
21. Li Jun, Exploration on Internal Control System Construction and Practice of Accounting Firms, *Modern Economic Information*, 2018-07-25:11-14
22. Luo Jinhua, Analysis on Accelerating the Construction of Internal Control of Accounting Firms, *China Township Enterprises Accounting*, February 15, 2018:16-18
23. Nicolaou, A. I. (2000). Quality of accounting information and ERP systems. *International Journal of Accounting Information Systems*, 1(3), 185-212.
24. Ofoegbu, G. N., & Uwaoma, I. C. (2021). The impact of information technology on internal control systems in Nigerian banks. *Journal of Economics and Business Research*, 27(2), 145-164.
25. Otebode, A. K., & Akinmola, R. M. (2019). Effectiveness of internal controls in accounting firms in developing countries. *Journal of Accounting, Auditing & Finance*, 34(2), 223-240.
26. Park S J, Oh M J, Lee E C. The Effect of Personnel Characteristics in the Internal Accounting Control System on Discretionary Tax Accruals: Evidence from Korea. *Australian Accounting Review*, 2018.
27. Pathak, B. (2021). Financial technology and risk management in accounting firms. *International Journal of Financial Management*, 11(2), 34-42.
28. Pu Lianji, On the Construction of Internal Control System and Practice of Modern Marketing in Accounting Firms (the next issue), September 21-13-15, 2018
29. Qatawneh, A.M. (2005), The Role of Using Information Technology on the Effectiveness of Accounting Information Systems: A Study on Banking and Insurance Entities Listed on Amman Stock Exchange's First Market, an unpublished thesis for PhD, Arab Academy for Banking and Financial Sciences, Amman, Jordan
30. Raed, K. (2017). The Impact of Accounting Information Systems on the Banks Success: Evidence from Jordan. *Research Journal of Finance and Accounting*, 8(17), 1-14
31. Rahman, A. A., & Nurullah, M. (2020). The impact of information management technology on internal control effectiveness. *International Journal of Information Management*, 52, 102073.
32. Rehab, U. (2018). The Impact of Accounting Information Systems on Organizational Performance: The Context of Saudi's SMEs. *International Review of Management and Marketing*, 8(2), 69-73.
33. Saban, K., & Gabriele, F. (2021). Accounting firms' efficiency through technology adoption: Evidence from emerging markets. *International Journal of Accounting and Financial Reporting*, 11(2), 27-45.
34. Salehi M. Rostami V. and Mogadam A., (2010), Usefulness of Accounting Information System in Emerging Economy: Empirical Evidence of Iran, *International Journal of Economics and Finance*. 2(2). Available on www.ccsenet.org/ijef
35. Soderstrom, N. S., & Wongsunwai, W. (2016). Information technology and internal control quality. *Contemporary Accounting Research*, 33(4), 1413-1442.
36. Teoh, S. H., & Lim, Y. Y. (2018). Accounting information systems in Malaysian firms: An empirical study. *Journal of Accounting in Emerging Economies*, 8(3), 376-391.
37. Teoh, Y. T., & Loh, L. (2019). The impact of management information systems on internal control: A Malaysian perspective. *Journal of Applied Finance and Banking*, 9(2), 37-49.
38. Trabulsi Rehab U. (2018) The Impact of Accounting Information Systems on Organizational Performance: The Context of Saudi's SMEs *International Review of Management and Marketing*, 8(2), 69-73.
39. Warren, D. (2018). *Accounting information systems: A business process approach* (5th ed.). Cengage Learning.