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Unveiling the Financial Performance Impact: Internal Auditing's Role in Saudi Firms

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ABSTRACT

This study aims to investigate the direct impact of internal auditing (IA) on financial performance (FP) and its indirect effect mediated through an internal control system (ICS). The examination utilizes responses from 257 professionals in roles such as accountant, financial manager, financial controller, financial auditor, or head of an internal audit unit within a selected sample of firms in the Kingdom of Saudi Arabia (KSA). Utilizing PLS modeling for analysis, the study reveals a significant direct influence of IA on FP. Additionally, the study demonstrates that IA, through its impact on ICS, contributes to the enhancement of FP. The mediation of ICS between IA and FP in Saudi firms was tested and found to be partial. Notably, the indirect influence of IA on FP was observed to be more pronounced than its direct influence. Researchers have argued that independent IA plays a vital role in supporting firms' ability to maintain and improve performance, and in this study the role of IA is tested in relation to mediating FP through improved ICS. The findings suggest that firms should emphasize the importance of IA in their strategic planning and resource allocation to enhance their overall financial health. Furthermore, the results highlight the necessity for continuous training and development for IA professionals to ensure they are equipped with the latest skills and knowledge to effectively improve ICS and, consequently, FP. Based on our findings and in support of the proposed model, we concluded that IA improved ICS, which, in turn improved FP. Hence, it is necessary for firms to solicit adequate independent IA to improve ICS, with the further goal of improving FP.

KEYWORDS: Internal Auditing, Financial performance, Internal control system, PLS modeling, Saudi Arabia

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1. INTRODUCTION

In the wake of the financial scandals in the early 2000s involving publicly traded companies such as Enron Corporation, Tyco International plc, and WorldCom, internal audit (IA) has come under increasing scrutiny and experienced a remarkable change in scope and functions (Vinten, 2003). In response to these financial scandals, the U.S. Congress passed the Sarbanes-Oxley Act (SOX) in 2002, the broad aim of which was to improve accountability, add value, and help organizations achieve their objectives. The act has required both managers and internal auditors of public companies to take on more responsibilities to apply new fraud prevention measures to detect and deter fraud (Patterson and Smith, 2007). The act has also required public companies to have effective internal control systems (ICS) which encompass the means and actions necessary to facilitate operational risk management. The rationale for this requirement is that having an effective ICS makes fraud more difficult to commit and easier to detect (Patterson and Smith, 2007). This requirement also enables companies to (1) protect their resources against waste and inefficiency; (2) ensure accuracy and reliability in accounting and operating data; (3) ensure compliance with the policies of the organization; and (4) evaluate the level of performance for each unit (SOX, 2002).

In the same vein, the Institute of Internal Auditing (IIA) has noted that IA's activities should include supporting leadership, creating more values, participating in strategic development and risk management, and ensuring that the system of internal control is operating effectively. The IIA assumes that having effective IA functions may contribute to enhanced risk management (Harrington, 2004), providing management with assurance and an in-house consulting service which reduces risks and improves companies' profitability and market value (Dsouza and Jain, 2021; Bshayreh et al., 2021). Hermanson and Rittenberg (2003) and Alzeban & Gwilliam (2014) believe that the existence of effective IA functions reduces an organization's malpractices and irregularities, with organization failure being the result of the poor implementation of IA. Hence, the roles of IA have expanded on both practical and strategic levels. On the practical level, IA functions have become a cornerstone for (1) establishing a sound corporate governance process (Soh & Bennie, 2011); (2) enhancing the reliability and integrity of companies' financial and operational information, which helps all levels of management make appropriate business decisions; and (3) enabling companies to have efficient growth and development to maintain sustainable financial conditions (Muchiri and Jagongo, 2017).

On the strategic level, IA roles have expanded from value preservation to value creation by focusing more on key preservation control activities to improve IA capabilities. For example, to monitor the ICS, the current IA focus is on whether it is the right system and whether it is being performed correctly and in a cost-effective manner (e.g., moving from manual/detective control to automated/preventive controls). Meanwhile, historically, the focus was on whether the system was being performed or procedures were being followed (KPMG, 2007).

The logical assumption in the above introduction is one which supports the theory that there exists an interactive relation between IA functions and the ICS, and that this relation impacts companies' financial performance (FP). Nonetheless, this potential relationship and its impact on FP has not been fully examined and empirical evidence concerning its impact on companies' FP is needed. Therefore, the broad aim of this study is to address this gap in the literature and examine the impact of IA through ICS on financial performance in Saudi Listed Companies.

This study is motivated by the slowdown of global economic growth due to COVID – 19 over the past few years. All types of business have experienced significant challenges, and the FP of most companies, including Saudi Listed Companies, has been affected due to the pandemic (Makni, 2023). Alhawel et al. (2020)

argued that having an appropriate internal corporate governance might mitigate the decline in FP, and internal auditors may be part of this solution by ensuring that these companies have effective ICS (Odek and Okoth, 2019). The study is also motivated by the unique Saudi business environment and a growing capital market, particularly driven by the country's adoption of the Vision 2030. Alsaeed (2006) states that these growing capital markets have several open windows for research and more studies on these markets are needed to attract the attention of regulatory bodies and firm managers. This study also contributes to the literature on the roles played by internal auditors in strengthening the internal control system to improve companies' financial performance.

Several studies have examined the impact of IA functions and the ICS on companies' FP (Hitt et al., 1996; Ejoh and Ejom, 2014; Sarens & Abdolmohammadi, 2010; Brennan & Soloman, 2008). These studies have used different financial measures, including the return on equity, revenue growth, return on stock, return on asset, and return on sales, among others. In this study, we examine the existence of this link based on the perceptions of those with first line knowledge, including accountants, financial managers, financial controllers, financial auditors, and heads of IA audit units at a selected sample of listed companies in the Kingdom of Saudi Arabia (KSA).

The present study is organized as follows: the next section, Section 2 provides the theoretical background. Section 3 presents the literature review and hypotheses development, while Section 4 delineates the methodological approach and data collection procedures. Section 5 details descriptive findings, followed by Section 6 which presents the empirical results and the discussion of these results. The paper concludes with a final section.

2. LITERATURE REVIEW

Several studies in the accounting and auditing literature have employed the agency theory as a theoretical framework. This theory argues that in publicly held companies, agency costs are likely to be increased by the separation between owners and management (Jensen & Meckling, 1976). According to this theory, while owners (principals) hire managers (agents) to represent their interests and manage their companies in accordance with their strategies, managers may sometimes try to serve their own personal interests. For example, owners may have strategic objectives which aim to maximize the market value of their companies and increase their wealth. On the other hand, managers may be concerned with maximizing profits and increasing short-term market value to increase their salaries and bonuses (Huong et al., 2022).

This study leverages agency theory to explore the impact of Internal Auditing (IA) on Financial Performance (FP) through Internal Control Systems (ICS). The investigation is based on responses gathered from a Likert-type survey completed by professionals in roles such as accountants, financial managers, financial controllers, financial auditors, and heads of internal audit units at various firms in Saudi Arabia (KSA). In the context of KSA firms, the agency theory is applied, where management assumes the role of the principal and staff as the agents. The theory suggests that organizations striving for optimal financial performance should mitigate the negative effects of the agent-principal relationship by implementing robust internal control systems and incorporating effective internal auditing practices.

The presence of external and internal auditors may help mitigate this agency problem, though Fonseca et al. (2020) argue that internal auditors may play a more effective role than external auditors in companies' achievement of their strategic objectives. The main role of internal auditors is to verify a company's corporate governance, ICS, and risk management with the aim of increasing its value and enhancing its FP for the long term. Meanwhile, the main task of external auditors is to verify and assess the truth and fairness of a company's annual financial reports. The

association between IA functions and FP has been explored by several studies, with some identifying the two factors as being linked directly and others identifying them as being linked through a company's ICS. Financial performance is an indicator of a company's ability to survive in the unforeseeable future, and it is also an indicator of how a company's resources are controlled and managed to safeguard assets, increase efficacy, and achieve objectives (Subhi and Stanišić, 2016). Dahir & Omar (2016) collected data from 200 questionnaires to explore the impact of IA practices on organizational FP in selected Somalian companies, identifying a significant positive relationship between the two factors. Albkour & Chaudhary (2017) also explored the impact of IA on organizational FP in selected banks in Jordan among a sample of 145 employees, with the findings also indicating a significant impact of IA.

In addition, Jordan, Alflahat (2017) explored the impact of IA on the organizational FP of Jordanian companies including Jordan Telecom, National Petroleum Company, and Jordan Electric Power Company. Data were collected using a questionnaire completed by a sample of 290 employees, and multiple linear regression was used to analyze the data, with IA as the independent variable and organizational FP as the dependent variable. The proxy measures of internal audit were internal controls, professional competence, independence of internal audit, and internal audit standards, and the findings indicated a significant impact of IA on organizational FP. Similarly, Dsouza and Jain (2021) explored the role that IA plays in helping organizations maintain financial stability and attain their financial goals, reporting a positive correlation between IA quality and FP. Dsouza and Jain highlighted that it is important that internal auditors comply with auditing standards and best practices when assessing the financial records of an organization, as this ensures financial stability and improves the confidence of stakeholders in management practices.

Kenya, Simbiri et al. (2023) examined the roles of IA practices in monitoring and controlling risks to improve transparency and honesty in the financial reporting process. The Positive Accounting Theory of Internal Auditing Risk Planning, the Contingency Theory of Risk Management, and the Agency Theory of Internal Audit Capacity formed the theoretical framework of the study. The regression analysis showed that risk-based audit has the potential to enhance transparency and accountability, which is likely to impact FP significantly. The researchers concluded that taking risk into account makes internal auditors more likely to help organizations prioritize their resources and hence increase their profits.

The logic conclusion of the literature reviewed is the existence of direct relationship between IA practices and companies' FP. It seems likely that the IA practices could have a pivotal role in the process of managing risks that could be experienced by companies, verifying their financial reports, safeguarding their assets, and improving the efficiency of the uses of these assets (Hermanson and Rittenberg, 2003; Gwilliam, 2014; Alflahat, 2017; Subhi and Stanišić, 2016; Badara, 2013). In addition, the agency theory argues that agency costs arise from the separation between owners and management in publicly held companies. Fonseca et al. (2020) argued that internal auditors are likely to decrease these costs since they are concerned with improving FP and owners' wealth in the long term. Based on this relationship that has been observed between the IA practices and companies' FP, the following hypothesis was developed:

H1: Internal auditing (IA) has a significant direct influence on financial performance (FP)

The Institute of Internal Auditing (IIA) has identified the roles played by internal auditors as supporting leadership, increasing more values, developing strategic plans, ensuring risk management, and ensuring that the ICS is operating effectively (Hermanson and Rittenberg, 2003, and Gwilliam, 2014). Badara (2013) explored the impact of IA on ICS effectiveness at the local government level, concluding that IA functions can have a positive impact on ICS effectiveness and can

help organizations attain their goals. Likewise in Malaysia, the explanatory study of Haron et al. (2014) examined the role played by IA in supporting management with improving the performance of their public sector organizations.

The findings indicated that IA is designed to increase an organization's value, as it provides independent assurance that the governance, internal control, and risk management processes of an organization are operating effectively and efficiently. It was also found that IA can influence professional practices and help in the establishment of an effective accountability system. In the Provincial Treasuries of South Africa, Msindwana & Ngwakwe (2022) studied the association between internal audit effectiveness and financial accountability, with the broad aim of identifying IA's role in enhancing control on public sector expenditures and transparency. Adopting a quantitative approach, data were collected from nine provincial treasuries of South Africa, and the findings indicated that across all the expenditure programs of provincial treasuries in South Africa, IA has the potential to enhance financial accountability. It was concluded that IA should be adopted by government departments as a monitoring tool for improving financial accountability and delivering public services.

Given that internal auditors play an essential role in reviewing and strengthening companies' ICSs, (Harrington, 2004; Dsouza and Jain, 2021; Bshayreh et al., 2021; Hermanson and Rittenberg, 2003 and Alzeban & Gwilliam, 2014), it could be deducted that there is an interactive relation between IA functions and the ICS, and accordingly the following hypothesis was developed:

H2: Internal auditing (IA) has a significant influence on internal control system (ICS).

The ICS is necessary for ensuring efficient and effective operations and hence safeguarding assets. It is also important for maintaining effective management control, a clear definition of objectivity, and adequate support from top management. Khamis (2014) explored the effectiveness of the ICS in a selection of banks in Zanzibar, with the aim of establishing a relationship between ICS and FP. A cross-sectional survey was used for data collection, and the results indicated a significant positive relationship between ICS and organizational FP. Khamis concluded that to some extent, banks in Zanzibar have sound ICSs, though all aspects of ICS could be enhanced by management at these banks. In another study, Kinyua et al. (2015) examined the impact of ICS on FP at Nairobi Security Exchange (NSE) listed companies. Several ICS components were examined, including internal audit, control environment, internal control activities, risk management, and role of corporate governance controls. Primary and secondary data were analyzed using SPSS, and the hypotheses were tested using correlation analyses, ANNOVA, and Chi-Square. The findings indicated a significant impact of ICS on FP, with the researchers concluding that companies ought to enhance their ICSs in order to improve FP.

The relationship between ICS and FP was also explored by Ejoh and Ejom (2014) at Cross River State College of Education, an academic institution in Nigeria. Although the findings did not indicate a significant and direct association between ICS and FP, the results did highlight that having an effective ICS is essential for reducing theft. They found that fraudulent activities in public sector organizations can be effectively detected and prevented by IA, especially if auditors are equipped with electronic data processing and an environment within which they have the freedom to carry out their work efficiently.

Otoo et al. (2021) explored the failures and crises experienced by the banking industry worldwide. The study aimed to find out the extent to which financial institutions worldwide depend on ICS effectiveness and efficiency for their growth and development. Specifically, the researchers were interested in assessing the impact of the five elements of ICS (i.e., risk assessment, control environment, information and communications, monitoring, and control activities) on the performance of universal banks in Ghana. The study followed

a quantitative research approach using a regression analysis tool, and the findings indicated that all the ICS elements had a positive impact. This supported the findings of Pickett (2010) and Steinberg (2011), who reported that the ICS elements interact to form an integrated system which is essential for enterprises' successful operation.

Based on the literature reviewed it is obvious that internal auditors are required to verify the ICS to identify its strengths and weaknesses and provide management with suggestions on how to rectify these weaknesses Harrington, 2004; Dsouza and Jain, 2021; Bshayreh et al., 2021; Hermanson and Rittenberg, 2003 and Alzeban & Gwilliam, 2014). It is also obvious that having an effective ICS in a company is essential for protecting its resources against waste and inefficiency, ensuring the accuracy and reliability of its financial reports, and its FP (Patterson and Smith, 2007; Khamis, 2013 & 2014; Ejoh and Ejom, 2014; Kinyua et al., 2015). In addition, the agency theory suggests that there is always an agency problem due to the inefficiency of companies' ICSs. This agency problem results from the separation between ownership and management in publicly listed companies. Hence, the agency theory argues that the existence of an effective ICS is likely to improve a company's growth, transparency, leadership, social responsibility and trust, protection of shareholders and company assets, and FP (Henze, 2010). Hence, the following two hypothesis were developed:

H3: Internal control system (ICS) has a significant influence on financial performance (FP).

H4: Internal control system (ICS) mediates the association between internal auditing (IA) and financial performance (FP).

3. METHODOLOGY

Instrument Design

We developed a questionnaire using scales adopted from earlier studies to collect data from the respondents. The questionnaire consisted of two sections, with the first section focusing on personal demographics (i.e., gender, age, education, major, place of employment, practical experience, title, and professional qualifications) and firm characteristics (i.e., company sector by ownership, company age, and company size measured by number of employees). The second section comprised statements used to measure the variables of interest anchored to a 5-point Likert-type scale ranging from strongly agree (5) to strongly disagree (1). The scales for the variables were as follows:

– Internal audit scale: 10 statements taken from Kiabel (2012) and adapted for the purpose of the present study.

– Internal control system scale: 12 statements taken from Ejoh and Ejom (2014) and adapted for the purpose of the present study;

– Profit scale: 6 statements taken from Adeinat and Kassim (2019) and Al Rahahleh et al. (2023) and adapted for the purpose of the present study;

– ROI scale: 2 statements taken from Adeinat and Kassim (2019) and Al Rahahleh et al. (2023) and adapted for the purpose of the present study;

– ROE: 2 statements taken from Adeinat and Kassim (2019) and Al Rahahleh et al. (2023) and adapted for the purpose of the present study;

– External influences: 2 statements taken from Kiabel (2012) and adapted for the purpose of the present study.

The scales, which were originally published in English, were translated into Arabic by a language editor. Face validity was examined and confirmed by experts with significant experience in the design of questionnaire instruments.

Analysis Approach

The model proposed in this study is designed to test the possible role of internal control system (ICS) as a mediator between internal auditing (IA) and financial performance (FP). Quantitative data were collected using the developed questionnaire and then analyzed. Given that it is more effective than comparable models such as

univariate analysis using SPSS in terms of analyzing measurement models and structural models simultaneously, Partial Least Squares (PLS) modelling was used to evaluate the measurement model and the hypotheses. The measurement model was examined based on reliability (Cronbach's alpha), convergent validity (individual item standardized factor loading), composite reliability (CR), average variance extracted (AVE), and discriminant validity (Fornell-Larcker, heterotrait-monotrait ratio of correlations (HTMT)). The structural model was examined based on the coefficients of predictive capability (adjusted R2) and beta coefficients (with significance levels reported) through bootstrapping (5,000 subsamples), (Hair et al., 2021; Ringle et al., 2015).

Sampling and Data Preparation

In the present study, we examine the influence of ICS as a mediator between IA and FP based on a sample of firms operating in the KSA. Data were collected using a self-administered structured questionnaire instrument completed by a sample of professionals engaged in work related to internal audit tasks at targeted firms. Responses were collected during the period of April to June 2022. In total, 316 completed responses were received, of which 58 questionnaires were found to have consistent patterns and were therefore considered invalid and excluded from the analysis. Further, another response was dropped from the analysis because it was identified as an outlier based on Cook's distance value, according to which the cutoff value is > 0.1. The final sample therefore comprised 257 valid responses. The skewness and kurtosis values were found to be around zero and were therefore within the range of ±2.2, as proposed by Sposito et al. (1983). Finally, Harman's single-factor test was performed to determine the influence of the common method bias. The single-factor solution was not a good fit for the data given that the variance was found to be 38.94% and, therefore, < 50%, indicating that bias is not an issue in the dataset (Podsakoff et al., 2012).

Respondents' Characteristics and Firms' Characteristics

Table 1 presents respondents' characteristics including gender, age, level of education, field of their professional experience and interests.

TABLE 1. Respondents' characteristics (n = 257)

Group/Sub-Group	N	%
Gender		
Male	219	85.2%
Female	38	14.8%
Age		
24 years or below	10	3.9%
25–34 years	116	45.1%
35–44 years	96	37.4%
45–54 years	28	10.9%
55 years and older	7	2.7%
Highest educational level achieved		
High school diploma or below	49	19.1%
Bachelor	147	57.2%
Postgraduate	61	23.7%
Other	--	--
Major		
Accounting	94	36.6%
Finance	28	10.9%

PA	30	11.7%
BA	44	17.1%
Other	61	23.7%
Sector		
Public sector	91	35.4%
Private sector	155	60.3%
Freelance	5	1.9%
Other	6	2.3%
Professional experience		
Fewer than 5 years	65	25.3%
5–9 years	78	30.4%
10–14 years	53	20.6%
15 years or more	61	23.7%
Title		
Accountant	128	49.8%
Financial manager	36	14.0%
Financial controller	22	8.6%
Financial auditor	54	21.0%
Head of internal audit unit	17	6.6%
Professional certification		
SCOPA	24	9.3%
CPA	18	7.0%
ACCA	3	1.2%
CMA	17	6.6%
IPSAS	6	2.3%
None (did not hold a professional certification of any kind)	189	73.5%

Note: complied by authors

Many of the respondents were male (n = 219, 85.2%), while only 14.8% of the total sample were female (n = 38) (Table 1). The composition of the sample reflects the dominance of men in professions associated with internal audit tasks and processes in KSA firms. In terms of age, the majority of the respondents were in their late twenties or thirties, which we anticipated given that internal audit roles are not usually associated with entry-level positions. The age categories reflected in the sample were as follows: 24 years or below (n = 10, 3.9%), 25–34 years (n = 116, 45.1%), 35–44 years (n = 96, 37.4%), 45–54 years (n = 28, 10.9%), and 55 years or older (n = 7, 2.7%). Overall, the sample showed a high level of formal education, as only a small proportion of the respondents reported a high school diploma or less as the highest level of education achieved (n = 49, 19.1%). Meanwhile, over half of the respondents reported that a bachelor's degree was their highest qualification (n = 147, 57.2%), and close to a quarter reported having completed a postgraduate degree (n = 61, 23.7%).

The respondents had majored in the following subjects: accounting (n = 94, 36.6%), public accounting (PA) (n = 30, 11.7%), business administration (n = 44, 17.1%), finance (n = 28, 10.9%), and other (n = 61, 23.7%). The participants held professional certifications from various professional bodies as follows: Saudi Organization for Chartered and Professional Accountants (SCOPA) (n = 24, 9.3%), Chartered Public Accountant (CPA) (n = 18, 7.0%), Certified Management

Accountant (CMA) (n = 17, 6.6%), International Public Sector Accounting Standards (IPSAS) (n = 6, 2.3%), and Association of Chartered Certified Accountants (ACCA) (n = 3, 1.2%), whilst the remaining respondents (almost three quarters) did not hold a further professional certification of any kind (n = 189, 73.5%).

In terms of professional experience, just over a quarter of the sample had fewer than 5 years of experience (n = 65, 25.3%), whilst almost a third of the sample had 5 - 9 years of experience (n = 78, 30.4%). Slightly more than a fifth had 10 – 14 years (n = 53, 20.6%), and just under a quarter of the sample had 15 years or more of experience (n = 1, 23.7%).

The sample showed significant diversity in terms of sectors and titles. Almost two thirds of the respondents were employed in the private sector (n = 155, 60.3%), while just over a third were employed in the public sector (n = 91, 35.4%).

Meanwhile, a very small proportion fell in the 'other' category (n = 6, 2.3%), and an even smaller proportion reported being engaged in freelance work (n = 5, 1.9%). With regards to the respondents' titles, just under half were designated as accountants (n = 128, 49.8%), a fifth as financial auditors (n = 54, 21.0%), 14% as financial managers (n = 36), 8.6% as financial controllers (n = 22), and 6.6% as heads of internal audit units (n = 17).

Table 2 presents the firms' characteristics, including company experience based on the type, age and size (employment).

TABLE 2. Firms' characteristics (n = 257)

Group/Sub-Group	N	In Percentage
Company type		
Public shareholding company	70	27.2
Private company	121	47.1
Public sector	62	24.1
Other	4	1.6
Company size (number of employees)		
≤100	58	22.6
101–200	38	14.8
201–400	26	10.1
401–600	13	5.1
601–900	7	2.7
>900	115	44.7
Company age		
After 2000	67	26.1
1981–2000	46	17.9
1951–1980	76	29.6
1920–1950	68	26.5

Note: compiled by authors

Approximately half the surveyed respondents held a position at a private company (n = 121, 47.1%), more than a quarter (n = 70, 27.2%) held a position at a public shareholding company, almost a quarter (n = 62, 24.1%) held a position in the public sector, and very few respondents were employed (n = 4, 1.6%) at other types of companies. Further, the companies represented differed considerably in size as measured by number of employees. Close to half of the respondents (n = 115, 44.7%) held positions at large firms with more than 900 employees, and at the other end of the scale, just over a fifth (n = 58, 22.6%) held positions at small firms with 100 or fewer employees. Meanwhile, 14.8% of the respondents were at firms with 101–200 employees (n = 38), 10.1% at firms with 201–400 employees (n = 26), 5.1% at firms with

401–600 employees (n = 13), and 2.7% at firms with 601–900 employees (n = 7).

Finally, the firms represented were relatively diverse in terms of age. Firms established between 1950 and 1980 accounted for the largest proportion, i.e., almost a third of the sample (n = 76, 29.6%), whereas those established after 2000 accounted for more than a quarter of the sample (n = 67, 26.1%). Firms established between 1920 and 1950 (n = 68, 26.5%) also comprised more than a quarter of the sample, while firms established between 1980 and 2000 formed slightly less than a fifth of the sample (n = 46, 17.9%).

4. FINDINGS AND DISCUSSION

According to the descriptive findings presented in Table 3, the respondents showed a high level of agreement on all the variables of interest, according to which their firms have a high level of IA (M = 4.09), ICS (M = 4.11), Profit (M = 3.80), ROI (M = 3.86), ROE (M = 3.88), and FP (M = 3.85).

TABLE 3. Foreign Trade Turnover Analysis Mean and std. values (n = 257)

Variable	Descriptive analysis					Pearson correlations					
	Mean	**Level+**	**Std.**	**Min**	**Max**	**1**	**2**	**3**	**4**	**5**	**6**
IA	4.09	High	0.63	2.30	5.00	1					
ICS	4.11	High	0.61	2.08	5.00	0.726**	1				
Profit	3.80	High	0.86	1.00	5.00	0.352**	0.445**	1			
ROI	3.86	High	0.87	1.00	5.00	0.400**	0.440*	0.724**	1		
	3.88	High	0.86	1.00	5.00	0.369**	0.476**	0.727**	0.722**	1	
Financ. perform.	3.85	High	0.78	1.00	5.00	0.414**	0.502**	0.904**	0.903**	0.903**	1

Note: compiled by authors

** Correlation is significant at the 0.01 level.

+ The mean values were classified using the three-level scale suggested by Sekaran and Bougie (2019), which has been utilized in previous studies (e.g., Al Rahahleh, 2022) as: 3.67–5.00 indicating a high level of agreement, 2.34–3.669 denoting a moderate level of agreement, and 1–2.339 representing a low level of agreement.

The std. values were <1, which indicates agreement among the respondents. Further, the Pearson correlation indicated that FP is significantly and positively correlated with both IA and ICS, thereby providing support for the proposed framework. The Pearson correlation for IA and FP was r = 0.414**, and the Pearson correlation for ICS and FP Financial performance was r = 0.502**.

Step 1: Testing the measurement model

The measurement model was tested to determine the validity and reliability of the model factors. Next, in Table 4 there are provided results for model factors testing for export and import of agricultural products. We assessed the model factors by checking reliability (Cronbach's alpha), convergent validity (individual item standardized factor loading, composite reliability (CR), average variance extracted (AVE), and discriminant validity (Fornell-Larcker, Heterotrait-Monotrait Ratio of Correlations (HTMT)).

Regarding individual item standardized factor loading, a value of 0.50 is the generally accepted rule of thumb, although a value of 0.70 is preferred. All the statements were found to have a factor loading above 0.50, with a value greater than 0.70 for most of them. All the t-values were above 1.96 at a probability level of 0.05. All the factor loadings were significant and, therefore, confirmed the convergent validity of the model. Further, the AVE coefficients were above the generally accepted value of 0.50 for all the factors, which further confirmed the convergent validity of the model.

TABLE 4. Export and Import of Agricultural Products

Variable (**P <0.001)	Q	FL	t-value	Cronbach's α	CR	AVE
IA	IA1	0.691	17.902**	0.898	0.916	0.523
	IA2	0.751	22.510**			
	IA3	0.784	28.272**			
	IA4	0.698	18.993**			
	IA5	0.751	20.384**			
	IA6	0.761	24.993**			
	IA7	0.725	20.592**			
	IA8	0.704	19.070**			
	IA9	0.719	24.670**			
	IA10	0.636	14.170**			
ICS	ICS1	0.678	18.089**	0.912	0.926	0.511
	ICS2	0.748	19.733**			
	ICS3	0.717	24.300**			
	ICS4	0.755	15.685**			
	ICS5	0.677	11.718**			
	ICS6	0.604	23.843**			
	ICS7	0.737	21.851**			
	ICS8	0.756	18.773**			
	ICS9	0.689	25.366**			
	ICS10	0.739	24.699**			
	ICS11	0.755	17.178**			
	ICS12	0.705	23.479**			
Profit	P1	0.703	16.00**	0.927	0.944	0.738
	P2	0.902	47.861**			
	P3	0.853	26.332**			
	P4	0.855	43.609**			
	P5	0.905	65.290**			
	P6	0.890	48.541**			
ROI	ROI1	0.937	75.350**	0.841	0.926	0.863
	ROI2	0.944	100.166**			
ROE	ROE1	0.926	59.847**	0.869	0.938	0.884
	ROE2	0.931	76.873**			

Note: compiled by authors

The CR and Cronbach's alpha coefficients contributed to both the convergent validity and internal consistency of the factors, all of which were above the generally accepted value of 0.70.

The coefficients of Cronbach's alpha, CR, and AVE were as follows: IA (Cronbach's alpha = 0.898, CR = 0.916, AVE = 0.523); ICS (Cronbach's alpha = 0.912, CR = 0.926, AVE = 0.511); Profit (Cronbach's alpha = 0.927, CR = 0.944, AVE = 0.738); ROI (Cronbach's alpha

= 0.841, CR = 0.926, AVE = 0.863); and ROE (Cronbach's alpha = 0.869, CR = 0.938, AVE = 0.884).All the model factors met the standard for discriminant validity in relation to Fornell and Larcker's (1981) criterion, which is based on comparing the square root of the AVE value with the correlation between each pair of constructs.

Table 5 presents the discriminant validity results, showing that the square root of each of the AVE coefficients was greater than the square root of the construct correlations.

TABLE 5. Export and Import of Services

Variable	Fornell and Larcker					HTMT				
	1	2	3	4	5	1	2	3	4	5
IA	0.723									
ICS	0.734	0.715				0.803				
Profit	0.358	0.451	0.859			0.384	0.482			
ROE	0.372	0.481	0.727	0.929		0.424	0.544	0.823		
ROI	0.404	0.446	0.724	0.722	0.940	0.453	0.494	0.807	0.844	-

Note: compiled by authors

Further, all the values of the HTMT coefficients were significantly lower than the 0.85 cutoff (Henseler et al., 2015), which confirmed adequate discriminant validity for our measurement model.

Step 2: Testing the structural model. The hypothesized mediation role was tested through path analysis, and the structural model as found to be satisfactory, given that the collinearity issue was not a concern in the model.

IA explained R2 = 54% of ICS variation, whereas IA in conjunction with ICS explained R2 = 25.6% of the FP variation. The model controlled for company age and company size (number of employees) through dummy variables.

We focused on testing the influence of IA on FP through ICS based on responses to a Likert-type survey of 257 professionals employed as accountants, financial managers, financial controllers, financial auditors, and heads of internal audit units at a sample of KSA firms. Based on PLS modeling, provided in Figure 1, we found that IA significantly influenced FP and ICS, and that ICS, in turn, influenced FP.

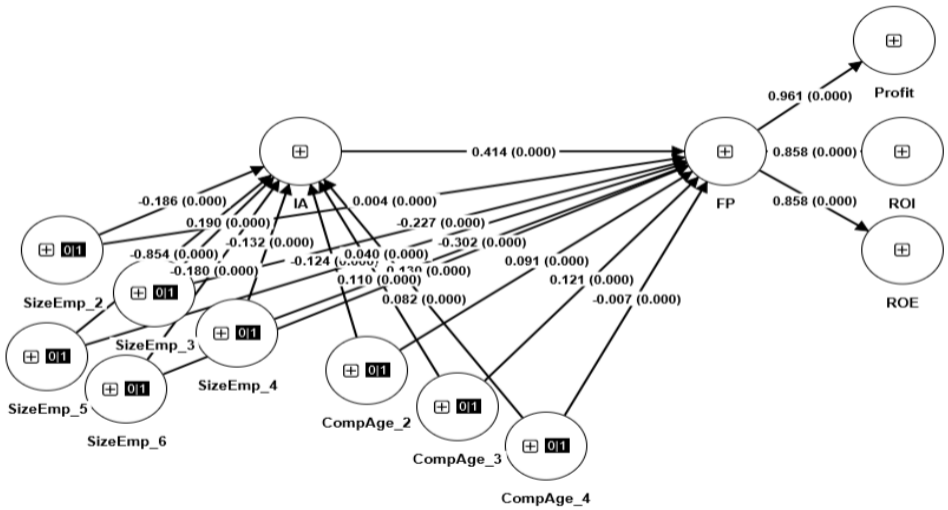

FIGURE 1. Path testing for structural model–direct influence (n = 257)

Note: compiled by authors based on calculations

We also tested the mediation role of ICS between IA and FP, which was found to be partial given that the indirect influence of IA on FP was stronger than the direct influence.

In more details, two models were examined, the first of which (Figure 1) tested the direct influence of IA on FP. The beta coefficient scored 0.414, which was significant as P = 0.000.

The findings suggest that with each incremental unit increase in IA, FP rises by 41.4%, thereby supporting H1. This aligns with previous research by Dahir & Omar (2016), Albkour & Chaudhary (2017), Alflahat (2017), and Simbiri et al. (2023), affirming a notable positive association between the two variables. Additionally, Dsouza and Jain (2021) also observed a positive correlation between IA quality and FP. The positive relationship underscores the role of IA in enhancing financial stability and fostering stakeholder confidence in management practices.

The path testing for the structural model is shown in Figure 2. In the second model, ICS is introduced as a mediator. As for the influence of IA on ICS, the beta coefficient was 0.735. This was significant as P = 0.000, given that as IA increases by 1 unit, ICS increases by 73.5%.

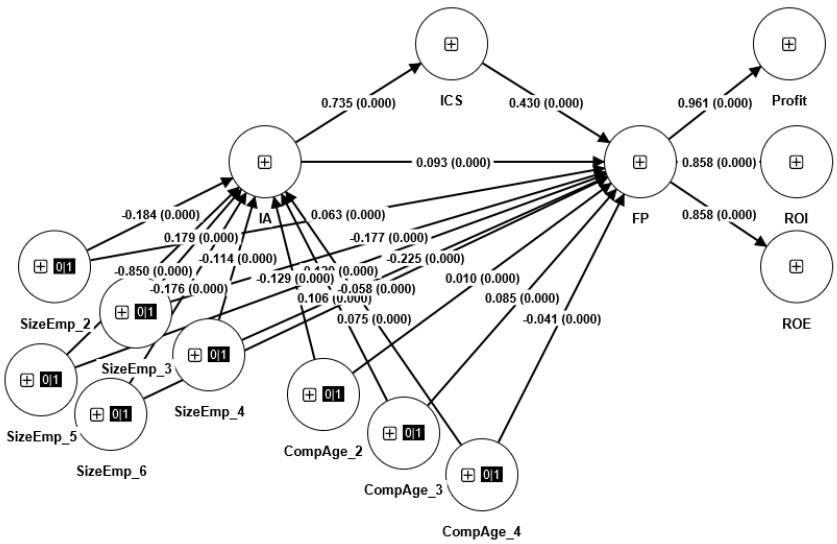

FIGURE 2. Path testing for the structural model (n = 257)

Note: compiled by authors based on calculations

Hence, H2 is supported. Our findings align with previous research by Hermanson and Rittenberg (2003), Harrington (2004), Badara (2013), Haron et al. (2014), Gwilliam (2014), Alzeban & Gwilliam (2014), Dsouza and Jain (2021), and Bshayreh et al. (2021). These studies emphasize the diverse roles played by internal auditors, such as providing leadership support, enhancing organizational values, formulating strategic plans, managing risks, and ensuring effective ICS operations.

Regarding the impact of ICS on FP, the beta coefficient recorded was 0.430, demonstrating significance with a P-value of 0.000. This significance implies that with a 1-unit increase in ICS, FP experiences a 43% increase, thereby providing strong support for H3. Our research aligns with previous studies. For example, Khamis (2014) and Kinyua et al. (2015) investigated the relationship between ICS and FP, revealing a significant positive correlation between the two variables. The findings emphasized a notable impact of ICS on FP, leading to the conclusion that companies should enhance their ICS to improve FP. Al Rahahleh et al. (2023) also found a significant

positive correlation between internal control and financial performance in their study. They highlighted financial accountability as a mediator in this relationship. Additionally, they indicated a direct positive influence of financial accountability on financial performance. In a study by Otoo et al. (2021), the focus was on finding out to which extent financial institutions worldwide depend on ICS effectiveness and efficiency for growth and development. The findings indicated a positive impact of all ICS elements, supporting the conclusions of Pickett (2010) and Steinberg (2011), who reported that these elements interact to form an integrated system crucial for the successful operation of enterprises.

In contrast, Ejoh and Ejom (2014) did not identify a direct and significant association between ICS and FP. However, their results underscored the essential role of an effective ICS in reducing theft. They found that IA can effectively detect and prevent fraudulent activities in public sector organizations.

Mediation was established ($0.735 \times 0.430 = 0.316$), and the indirect influence of IA on FP (IA ; ICS ; FP) was significant ($P = 0.000$). However, mediation was partial, as the direct influence when ICS was controlled for was still significant, given the beta value of 0.093 and given that $P = 0.000$. Hence, H4 was supported. The path estimates and hypothesis decisions are presented in Table 6.

TABLE 6. Path estimates and hypothesis decisions (n = 257)

H	Path	Beta	Decision
H1	IA → FP	0.414*	Supported
H2	IA → ICS	0.735*	Supported
H3	ICS → FP	0.430*	Supported
H4	IA → ICS → FP	Direct (0.093*) Indirect (0.316*)	Partial mediation

Note: complied by authors based on calculations
*$P < 0.05$

These findings should be considered by those in leadership roles at KSA firms. In efforts to improve financial performance, adequate IA possesses specific privileges and duties. Maintaining its autonomy can build more sophisticated and efficient ICS. Hence, the impact of a comprehensive and carefully executed IA goes far beyond checking accounts and financial statements. In fact, the process can, and should, entail establishing and supporting a system of financial control and accountability throughout the entire firm. This should be aligned with a well-established, companywide financial management philosophy, serving as a basis for strong accountability bolstered by meticulous record-keeping in support of realizing improvements in financial performance (Al Rahahleh et al., 2024). We also sought to identify indicators related to how the respondents view the independence and autonomy of the IA, as we proved that an independent IA has an influence on FP. To explore the respondents' positions in this regard, we asked them to indicate the extent to The literature consistently makes a case for the vital role of an independent IA in helping firms to maintain and improve their financial performance. Nonetheless, this potential relationship and its impact on FP has not been fully examined in the unique Saudi business environment and a growing capital market, particularly after the adoption of the Vision 2030. This study provides empirical evidence concerning the impact of IA on companies' FP. In addition, the literature on the relationship between IA and companies' FP did not examine the mediation role played by the ICS on the impact of IA on companies' FP. Hence, the broad aim of this study is to revisit this field of study and examine: (1) the impact of IA on FP; (2) the impact of IA on ICS; (3) the impact of ICS on FP; and (4) the impact of IA through ICS on the financial performance in the Saudi Listed Companies (SLC).

We proposed and examined two models. The first one (Figure 2) was designed to test the

direct impact of IA on FP, while the second model (Figure 3) was designed to test the possible role of Internal Control System (ICS) as a mediator factor between internal auditing (IA) and financial performance (FP). We have collected quantitative data through the survey instrument from professionals holding the positions of accountant, financial manager, financial controller, financial auditor, or head of an internal audit unit at a selected SLC. The result of our study supports the proposed two models. The study provides empirical evidence on: (1) a direct positive impact of IA on companies' FP, (2) a positive impact of the ICS on companies FP, (3) a positive impact of the IA on companies' ICSs, and (4) a mediation role played by the ICS between IA and companies' FP. Hence, an adequate independent IA certainly can improve ICS, through which stronger FP can accrue.

Based on the findings of this study, there is a clear opportunity to enhance the independence of internal auditors within SLC and allocate more resources towards strengthening the Internal Control Systems (ICS) to bolster financial performance. Additionally, providing additional training and development opportunities for IA professionals can amplify their contributions to both IA and ICS functions within the SLC, thereby enhancing governance within the companies, aligning with the objectives outlined in the Vision 2030 of the Kingdom of Saudi Arabia. Moreover, the refined model presented in this study sheds light on the mediation role played by ICS between IA and companies' financial performance, highlighting the potential for an independent IA to enhance ICS, consequently leading to stronger financial performance. As such, it is recommended that SLC management ensures the presence of an adequate independent IA, facilitating informed decision-making and accountability for financial performance, ultimately leading to more robust results.

Finally, the results of this study are associated with a limited number of SLC, and do not provide a full picture of the status quo of the impact of IA functions on companies' FP, particularly the mediation role played by the ICS between IA and FP. Therefore, future studies could be conducted to investigate these issues across more SLC.

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Visualization: Naseem Al Rahahleh, Yousef Alwardat
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