

The role of internal control and audit in improving the performance of government institutions: A case study of the Iraqi housing fund

Raghad M. Farhan^{1*}

¹College of Physical Education and Sport Science, University of Karbala, Karbala, Iraq; raghad.m@uokerbala.edu.iq (R.M.F.).

Abstract: This study aimed to assess the impact of internal control and auditing on government institution performance, using Iraq's Housing Fund as a case study. The study population comprised all Iraqi Housing Fund branches, with a sample of 114 respondents from financial managers, accounting heads, internal audit managers, and accounting/audit staff. Findings confirmed that internal control and auditing significantly influence government institution performance, as exemplified by the Iraqi Housing Fund. Based on these results, the study recommends the Housing Fund maintain its commitment to internal control and auditing due to their performance-enhancing role. Additionally, it suggests enhancing auditors' professional competence through training to align with industry advancements.

Keywords: *Audit, Government institutions, Internal control, The Iraqi housing fund.*

1. Introduction

The urgent need to enhance government institution performance has become increasingly clear amidst global economic and financial crises. These crises, often leading to organizational collapse, stem primarily from financial and administrative corruption, coupled with weak oversight. To safeguard stakeholder rights and ensure effective accountability, robust standards for managing these organizations must be developed and enforced. Effective corporate governance is crucial for accurate financial reporting, including internal control and financial results, as well as efficient internal control procedures.

Internal auditing is a managerial tool used to organize operations according to predetermined paths towards desired goals. Recognizing the value of its services, organizations prioritize internal auditing. Improving internal auditor performance and audit quality are crucial for modern business success. This study examines the relationship between pillars of enhanced government institution performance and internal audit quality.

Therefore, internal control and auditing are essential tools for enhancing government institution efficiency and effectiveness [1]. The Iraqi Housing Fund, a key provider of affordable housing, is one such institution. This study explores the role of internal control and auditing in improving the Housing Fund's performance, contributing to strategic objectives, enhancing service quality for beneficiaries, and mitigating institutional risks.

1.1. Research Problem

The need to enhance government institution performance has intensified following recent financial crises, collapses, and corporate scandals. This has emphasized auditors' governance role in preventing such occurrences. The absence of internal auditing in business organizations has adverse consequences, including compromised professional conduct of internal auditors, diminished internal audit quality, eroded investor confidence in financial statements, and jeopardized organizational growth, survival, and sustainability.

Based on this, the research problem can be summarized in the following main question and its sub-questions:

- Main Question: Do internal control and auditing play a role in improving the performance of government institutions, and specifically for The Iraqi Housing Fund?
- Sub-questions
- Does the application of internal auditing and internal control affect disclosure and transparency in the Iraqi Housing Fund?
- Does the application of internal auditing and internal control affect accountability in the Iraqi Housing Fund?
- Does the application of internal auditing and internal control affect responsibility in the Iraqi Housing Fund?
- Does the application of internal auditing and internal control affect justice in the Iraqi Housing Fund?
- Does the application of internal auditing and internal control affect independence in the Iraqi Housing Fund?
- Does the application of internal auditing and internal control affect laws and regulations in the Iraqi Housing Fund?

1.2. Objectives of the Study

This study aims to achieve the following objectives:

- To shed light on the concept of improving the performance of government institutions.
- To understand the importance of internal auditing and the factors that determine its quality.
- To explore the role that internal auditing plays in improving the performance of government institutions.
- To measure the role of internal auditing in applying performance improvement to The Iraqi Housing Fund.

1.3. Importance of the Study

This study significantly contributes by exploring the critical topic of internal auditing's impact on government institution performance. It is a pioneering effort linking internal auditing and control to enhanced government performance in the Iraqi context. Encompassing all Iraqi Housing Fund branches, this study offers valuable insights to the institution. Its findings and recommendations can be used to develop and improve the internal audit function, benefiting the Housing Fund and similar Iraqi government institutions.

2. Theoretical Framework

2.1. Internal Audit

The concept of internal audit has evolved in recent years to align with modern developments and the information revolution. This led the Institute of Internal Auditors (IIA) to adopt a contemporary internal audit definition that reflects current needs and emphasizes its organizational value. In its 1999 bulletin "Internal auditing is an independent and objective service that provides assurance and consulting to enhance an organization's operations. By systematically evaluating and improving risk management, control, and governance processes, internal auditing helps organizations achieve their goals [2].

Internal audit is a supervisory control that assesses the design and operation of other organizational controls to ensure their effectiveness. It evolved from the increasing need for top management to use it as a control and management tool to fulfill stakeholder needs. Internal audit assists management at all levels in fulfilling obligations and improving efficiency through analysis, evaluation, consultation, studies, and suggestions. It enables organizational self-correction and development [3]. Internal audit is also a management safety valve, described as The Eyes and Ears of Management [4].

Internal audit is pivotal to corporate governance. By enhancing credibility, fairness, and employee conduct, and reducing administrative and financial corruption risks, internal auditors empower citizens to hold companies accountable, thereby strengthening the governance process [5].

Professional and regulatory bodies recognize the crucial role of internal audit in corporate governance and their interconnectedness. The Cadbury Committee emphasized internal auditors' responsibility in fraud and misrepresentation prevention and detection. Achieving this requires independence, organization, and legal foundation. Reporting directly to the audit committee, rather than management, strengthens independence. Effective audit committees can leverage internal audit resources to access vital company-specific information, strengthening internal controls and accounting policies [6]. Effective corporate governance ensures accurate financial reporting, including internal control and financial results reports, and effective internal control procedures [7].

The Sarbanes-Oxley Act of 2002 significantly expanded the internal audit function's role in response to the US economy's financial scandals. The act aimed to improve corporate governance, with Section 404 mandating management to document, assess, and report on internal control effectiveness. External auditors were also required to evaluate management's assessment and express an opinion on it. The scope of internal auditing focuses on the following:

1. Examining financial, administrative, and operational information, and reviewing its reliability and the methods used to identify, measure, classify, and report such information [8]. This may include reviewing the methods related to identifying, measuring, classifying, and preparing reports on information and inquiries about specific items, as well as detailed examination of operations, balances, and procedures.
2. Reviewing the accounting system and internal control systems is a fundamental function that requires reasonable care and is derived from the management that delegates its tasks, in addition to supervising operations and making necessary recommendations.
3. Examining and evaluating the economic, administrative, and operational efficiency in the use of resources, as well as reviewing non-administrative controls in the organization, reviewing established systems, and ensuring compliance with adopted policies, plans, procedures, laws, and regulations that may have a general impact on operations and reports to determine the extent of the organization's adherence to these plans and policies [4].

Therefore, internal auditing encompasses several activities, primarily: reviewing and evaluating the adequacy and implementation of accounting, financial, and operational controls; assessing employee adherence to policies, plans, and procedures; evaluating accounting procedures for asset protection and security; determining the reliability of accounting and other organizational data; and assessing the effectiveness of responsibility execution.

Both internal and external audit standards outline criteria for assessing internal audit quality. For instance, AICPA's 1991 [9] Statement on Auditing Standards No. 65 identified competence (measured by qualifications and certifications) and objectivity (determined by reporting and staffing) as key factors. Audit program accuracy, sufficiency, and scope were also considered. Conversely, the Institute of Internal Auditors emphasized independence, objectivity, professionalism, and due care [10] as essential for quality internal auditing.

In this study, internal auditing will be analyzed based on the aforementioned Statement on Auditing Standards No. 65 issued by the American Institute of Certified Public Accountants.

2.2. Improving the Performance of Government Institutions

Financial difficulties within numerous large Iraqi government entities have spurred a growing need for controls, standards, ethical, and professional guidelines to bolster trust and credibility in financial reports. Such reports are vital for citizens and investors alike. Consequently, the imperative to enhance government institution performance has surfaced across developed and emerging economies in recent decades. This urgency was particularly amplified by financial crises afflicting various Iraqi institutions, directing research focus towards their performance [11].

The work of Williamson [12] posits that government institutions enhance performance as a strategic pursuit of primary objectives. This occurs within a moral framework originating internally as

an autonomous ethical entity. The institution's administrative structure, systems, and internal rules facilitate objective attainment through its own capacities, independent of individual dominance, without compromising the interests of relevant stakeholders.

Due to growing attention on improving government institution performance, numerous organizations have rigorously studied and defined standards for its implementation. Key contributors include the OECD, the Basel Committee under the Bank for International Settlements, and the World Bank Group's International Finance Corporation. This pursuit aims to safeguard shareholder rights, uphold justice, protect diverse interests, facilitate information sharing and communication, and establish organizational strategy [13].

Numerous literatures have indicated that improving the performance of government institutions, in order to achieve their objectives, is based on a set of fundamental pillars, namely:

1. **Disclosure and Transparency:** Transparency involves providing information to safeguard shareholder interests and demonstrate institutional accountability to society [14]. Transparency underpins justice, integrity, and trust in organizational management [15]. Its prominence rose with the expanding economic role of capital markets, as published financial reports became crucial for decision-making [16]. Financial report disclosures, including explanations, tables, and statement components, must be presented fairly, honestly, truthfully, objectively, and integrally to all shareholders and stakeholders promptly [17].

2. **Accountability:** Stakeholders, including shareholders, employees, and the community, continuously monitor and assess management. This oversight is facilitated by internal structures like independent audit committees and internal audit departments. Hermanson & Rittenberg [18] argue that realizing organizational strategy necessitates holding the board, audit committee, senior management, internal and external auditors accountable to stakeholders.

3. **Responsibility:** This means that the company has a moral mission to fulfill in society and that managers recognize that they have obligations towards protecting the environment and towards employees, as well as improving the services provided to them [19]. Credit Lyonnais S.A. has clarified responsibility in the following paragraphs [20]: the existence of the competence and effectiveness of the board of directors, the establishment of mechanisms to punish executive managers and board members, taking effective action against individuals who overstep their boundaries, and transparency and fairness in dealing with shares by board members.

4. **Justice:** This entails respecting the rights of the company's stakeholders and equitably distributing tasks, duties, and responsibilities among employees [21]. In this regard, the OECD has highlighted the necessity of establishing systems that prevent employees, including management, from exploiting their positions, and mandates that board members disclose any significant interests related to the organization's operations [22].

5. **Independence:** Independence is a cornerstone for mitigating or eliminating conflicts of interest through the establishment of independent committees, the appointment of auditors, and the prevention of any party's control or influence over board decisions [15]. The Institute of Internal Auditors' U.S. standards underscore the criticality of internal auditor independence and objectivity. This includes reporting to the highest organizational level, maintaining impartiality, and avoiding any bias or conflict of interest [23].

6. **Laws and Regulations:** This refers to the intersection of the rules for improving the performance of government institutions with numerous laws, such as company laws, capital markets, banks, accounting, auditing, and other laws and regulations that clarify the rights and duties of shareholders, such as the right to vote, the right to elect board members, the right to appoint and dismiss auditors, and the rights of the community on the organization and its duties towards it. Corporate governance is legally crucial to mitigate contract enforcement challenges among organizational stakeholders. It safeguards against contract breaches and protects the rights of all parties involved [24].

2.3. Previous Studies

In order to form a conceptual framework on which the current study is based to clarify the basic aspects of its subject, previous related studies were reviewed. The following is a review of some of these studies.

Rezaee's study [25], conducted on American business companies, aimed to identify the role of audit committees in improving the shared role within the organization. This study proposed some guiding principles for improving institutional quality, the most important of which is that the board of directors should select the company's CEO and oversee his activities and the executive activities of senior management. Management should be responsible for carrying out operational activities and preparing the company's financial statements in an ethical and effective manner with the aim of creating value for shareholder .

Furthermore, a study conducted by A. Juma'a [26], which focused on improving the performance of government institutions and the evolution of the internal auditing profession, highlighted the impact of the evolution of the internal auditing profession in supporting the improvement of performance in Jordanian government institutions in light of local legislation.

Mangena and Pike's study [27] was interested in revealing the relationship between improving the performance of government institutions and the level of disclosure, by studying the impact of certain characteristics of company shareholders, the size of audit committees, and financial expertise. The study arrived at a set of results, the most important of which is the existence of a statistically significant relationship between the level of disclosure and each of the characteristics of shareholders, the size of the audit committees formed, and financial expertise.

Furthermore, Joshua's study [28] sought to propose a reform to corporate governance by insuring financial statement risk and eliminating conflicts of interest, which are a constant threat to the relationship between the auditor and their clients, thereby increasing the quality of financial statements.

Zwelf and Al-Jawhar's study [29] focused on analyzing the relationship between the elements of internal control and the pillars of improving the performance of government institutions, and demonstrating the extent to which these elements contribute and their role in strengthening these pillars. The study revealed a set of results, the most important of which is that the success of improving the performance of government institutions requires organizations to adopt elements of internal control, and that all of these elements play an important role in strengthening all the pillars of improving the performance of government institutions.

Matar and Noor's study [30] aimed to assess the extent to which Jordanian public shareholding companies operating in the banking and industrial sectors adhere to the principles of improving government performance. The study yielded a set of results that summarize the level of commitment of public shareholding companies operating in these two sectors ranging from strong to very weak, with a note that the level of this commitment tends to favor the banking sector over the industrial sector.

Fateh and Aishi's study [31] sought to highlight the importance of a regulatory framework to ensure the truthfulness and integrity of the financial information presented and to limit its negative use that affects the interests of permanent parties and shareholders. The study showed that by ensuring the integrity, truthfulness, and accuracy of the presented accounts, the effectiveness of the accounting systems used has been guaranteed.

Issa's study [32] addressed the factors determining the quality of the internal audit function and its relationship to the quality of corporate governance. The study reached a number of results, the most important of which is that increasing the competence and objectivity of internal auditors and improving the quality of their work leads to improving the quality of the internal audit function, and that there is a positive relationship between the quality of the internal audit function and the quality of corporate governance.

3. Research Methodology

3.1. Research Model

To achieve the purpose of the study and reach its specified objectives, the following model was adopted to investigate the relationships between the study variables. Figure (1) illustrates these relationships.

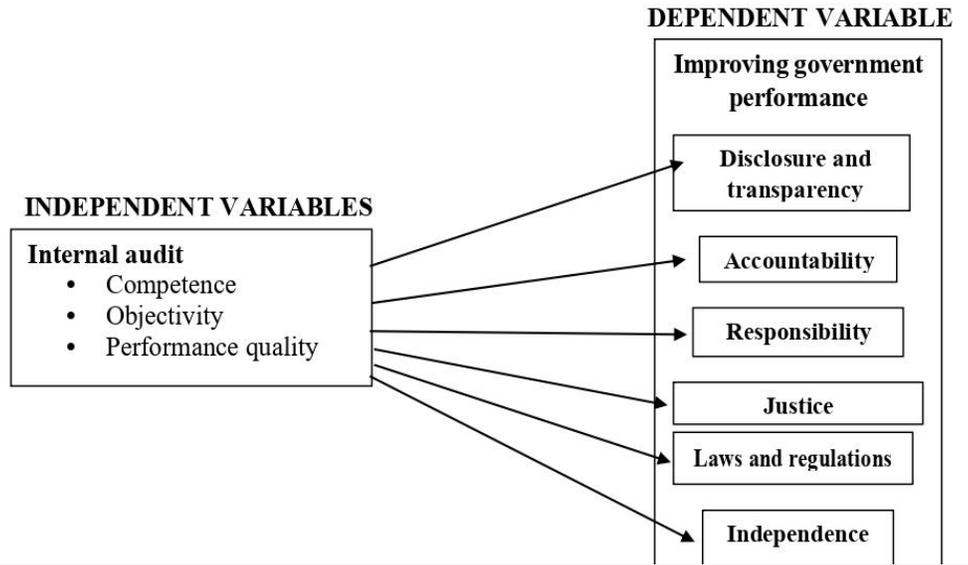


Figure 1.
Research model.

3.2. Research Hypotheses

The study is based on the following:

Main Hypothesis (HO): "There is no statistically significant effect of internal control and auditing on improving the performance of government institutions, especially in the case of The Iraqi Housing Funds."

And from this main hypothesis, the following sub-hypotheses emerge:

Sub-hypothesis 1 (HO₁): "There is no statistically significant effect of internal control on improving disclosure and transparency in government institutions, especially in the case of The Iraqi Housing Funds."

Sub-hypothesis 2 (HO₂): "There is no statistically significant effect of internal control on improving accountability in government institutions, especially in the case of The Iraqi Housing Funds."

Sub-hypothesis 3 (HO₃): "There is no statistically significant effect of internal control on improving responsibility in government institutions, especially in the case of The Iraqi Housing Funds."

Sub-hypothesis 4 (HO₄): "There is no statistically significant effect of internal control on improving justice in government institutions, especially in the case of The Iraqi Housing Funds."

Sub-hypothesis 5 (HO₅): "There is no statistically significant effect of internal control in improving independence in government institutions, especially in the case of The Iraqi Housing Fund."

Sub-hypothesis 6 (HO₆): "There is no statistically significant effect of internal control in improving the application of laws and regulations in government institutions, especially in the case of The Iraqi Housing Fund."

3.3. Study Population and Sample

The study population consists of all branches of The Iraqi Housing Fund and its affiliated institutions, totaling 27 branches. A total of 150 questionnaires were distributed to financial managers, heads of accounting departments, internal audit managers, and employees in accounting and internal audit departments. Of these, 117 questionnaires were returned. Three questionnaires were excluded due

to incomplete information, leaving 114 completed questionnaires for analysis, representing a response rate of 76%.

3.4. Research Instrument

A questionnaire was developed to measure the study variables using a five-point Likert scale. The questionnaire consisted of two parts: the first part collected demographic data on the study sample, and the second part included statements that covered the study variables, measuring the role of internal control and audit in improving the performance of government institutions. These variables were disclosure and transparency, accountability, responsibility, justice, independence, laws and regulations, and internal audit quality, which was measured using the following indicators: competency indicator, objectivity indicator, and performance quality indicator. Regarding the limits adopted in this study when commenting on the mean of the variables in the study model, three levels were defined: high, medium, and low, based on the following equation: Class interval = (Upper limit of the alternative - Lower limit of the alternative) / Number of levels $(5-1)/3 = 4/3 = 1.33$.

The levels of the variable were categorized as follows: low (1-2.33), medium (2.33-3.66), and high (3.66-5). To assess the questionnaire's suitability, face validity was established through expert review. All suggested modifications were incorporated prior to data collection. Reliability was confirmed using Cronbach's alpha, yielding an excellent score of 96.64% [33]. This surpasses the acceptable reliability threshold of 60% for generalizable research.

3.5. Statistical Methods Used

Data analysis was performed using SPSS. Descriptive statistics (mean, standard deviation, and percentages) and inferential statistics (simple and multiple regression with ANOVA) were employed.

3.6. Limitations of the Study

The pillars of improving the performance of government institutions for the purposes of this study are: disclosure and transparency, accountability, responsibility, justice, independence, laws and regulations. These pillars are common to most studies that have addressed the topic of improving the performance of government institutions, and therefore, there may be other pillars that this study has not addressed. In addition, the specific factors for the quality of the internal audit function included in standard number 65 issued by the American Institute of Certified Public Accountants (AICPA) [9] were adopted as indicators to measure this quality, as these indicators are considered comprehensive and sufficient from the researchers' perspective to measure the aforementioned quality.

3.7. Field Study Results

3.7.1. Characteristics of the Study Sample

Table 1 shows that the highest percentage of academic specialization was in accounting (43.0%), followed by financial and banking sciences (27.2%), then business administration (9.6%), and economics (6.1%), while 14% held degrees from various other specializations. This indicates that the individuals in the study sample are qualified to work in the accounting and financial field.

Table 1 also shows that 62.3% of the study sample held a bachelor's degree, 20.2% held a master's degree, and 7.0% held a doctorate. The remaining 10.5% held degrees below the bachelor's level. This indicates a high level of educational attainment among the study sample due to the increasing emphasis on education in Iraq. Additionally, 18.4% of the sample held professional certifications.

Table 1.
Distribution of study sample by demographic characteristics.

Variable	Categories	Frequency	Percentage (%)
Academic specialization	Accounting	49	43.0
	Finance & banking	31	27.2
	Business administration	11	9.6
	Economics	7	6.1
	Other specializations	16	14.0
Educational qualifications & professional certifications	Below bachelor's	12	10.5
	Bachelor's	71	62.3
	Master's	23	20.2
	Doctorate	8	7.0
	Professional certification	21	18.4
Job title	Financial manager	13	11.4
	Internal audit manager	16	14.0
	Head of accounting department	6	5.3
	Accountant	63	55.3
	Internal auditor	16	14.0
Years of experience	Less than 5 years	13	11.4
	6-10 years	42	36.8
	11-15 years	34	29.8
	16-20 years	9	7.9
	Total	114	100%

As shown in the aforementioned table, accountants constitute the largest proportion of the study sample, accounting for 55.3% of the total sample size. Following this, internal audit managers and internal auditors accounted for 14.0%, followed by the position of financial manager at 11.4%, and finally, the position of accounting department head constituted 5.3% of the total sample. A comparison of job titles reveals that accountants significantly outnumbered individuals in other specializations.

As Table 1 illustrates, the majority of participants (36.8%) had 6-10 years of experience, followed by 11-15 years (29.8%), 21+ years (14%), less than 5 years (11.4%), and 16-20 years (7.9%). This substantial experience base equips the sample population to effectively handle accounting tasks, thereby enhancing their ability to comprehend and answer survey questions.

3.8. Descriptive Statistics of Study Variables

3.8.1. Disclosure and Transparency

Table 2 demonstrates that the importance of disclosure and transparency for internal audit quality in Kuwaiti listed industrial companies is substantial, with mean scores ranging from moderately high (3.3772) to high (4.1228). The overall mean of 3.7661 and a low standard deviation of 0.9652 suggest strong consensus among respondents on the positive impact of these factors.

Table 2.
Mean and standard deviation of disclosure and transparency.

Statements	Importance level	Rank	Standard deviation	Mean
Information is disclosed in a fair, honest, and truthful manner.	High	1	0.62599	4.1228
Information is disclosed objectively, honestly, and uprightly.	High	2	0.72253	4.0088
Important information is disclosed in a timely	High	3	1.0258	3.9737

manner without delay.				
Information about the ownership of the majority of the company's shares is provided.	Medium	4	1.1309	3.6316
Information about members of the board of directors is provided.	Medium	6	1.1397	3.3772
Information about executive managers is provided.	Medium	5	1.1462	3.4825
Overall mean	High		0.9652	3.7661

3.8.2. Accountability

Table 3 indicates that all importance levels for the variable of accountability were high in terms of impact, with arithmetic means ranging from 4.0088 to 3.7018. The overall result here indicates a high level of impact of accountability on internal auditing in The Iraqi Housing Funds from the perspective of the study sample. The overall arithmetic mean of the responses regarding this axis was (3.82677). The standard deviation was (0.8887), indicating a relatively high degree of homogeneity among the responses.

Table 3.

Mean and standard deviation of accountability.

Statements	Importance level	Rank	Standard deviation	Mean
The performance of executive management is evaluated and appraised.	High	2	0.96407	3.8684
Tasks that ensure the accurate performance of work by other company employees are carried out.	High	1	0.72253	4.0088
Periodic reports on business results are submitted.	High	3	1.0069	3.7281
The success of implementing periodic reports is evaluated.	High	4	0.86146	3.7018
Overall mean	High		0.8887	3.8267

3.8.3. Responsibility

Table 4 shows that responsibility levels for internal audit quality in the Iraqi Housing Fund were rated between high and medium, with mean scores ranging from 3.4561 to 3.9737. Overall, the results indicate a strong positive impact of responsibility on internal audit quality, as perceived by respondents. The mean score of 3.794 and standard deviation of 0.926 suggest a high degree of consensus on this matter.

Table 4.

Mean and standard deviation of responsibility.

Statements	Standard deviation	Rank	Importance level	Mean
The company's ethical message in the community is emphasized.	0.9399	4	High	3.8333
Managers are committed to their responsibilities towards the community.	0.8770	1	High	3.9737
Commitments to environmental protection are met.	1.0511	5	Medium	3.4561
Commitments to employees and improving their services are met.	0.78967	3	High	3.8509
Responsibilities towards shareholders and achieving appropriate returns for them are met.	1.0740	2	High	3.8596
Overall mean	0.9263		High	3.7947

3.8.4. Justice

Table 5 indicates that all importance levels for the variable of justice were high in terms of impact, with arithmetic means ranging from 4.0000 to 3.7368. The overall result here indicates a high level of impact of justice on the quality of internal auditing in the Iraqi Housing Funds from the perspective of the study sample. The overall arithmetic mean of the responses regarding this axis was (3.8684). The standard deviation was (0.9443), and this low value indicates that the responses of the study sample were relatively similar and consistent.

Table 5.
Mean and standard deviation of justice.

Statements	Mean	Standard deviation	Rank	Importance level
The rights of different employees in the company are respected.	3.8596	0.9011	3	High
Tasks and duties are distributed among company employees on a basis of justice and equality.	4.0000	0.8308	1	High
References are treated on a basis of justice and equality.	3.8772	1.0402	2	High
Rewards in the company are distributed on a basis of justice and equality.	3.7368	1.0051	4	High
Overall mean	3.8684	0.9443		High

3.8.5. Independence

Table 6 indicates that all importance levels for the variable of independence were at a medium level of impact, with arithmetic means ranging from 3.6140 to 3.3158. The overall result here indicates a moderate level of impact of independence on the quality of internal auditing in The Iraqi Housing Funds from the perspective of the respondents. The overall arithmetic mean was (3.308), and the standard deviation was (1.188).

Table 6.
Mean and standard deviation of independence.

Statements	Mean	Standard deviation	Rank	Importance level
The auditor is not subjected to any influences when performing tasks.	3.4912	1.2283	4	Medium
The auditor performs work with integrity and objectivity, free from any bias or conflict of interest.	3.6140	1.1171	1	Medium
Company employees enjoy intellectual independence in all matters entrusted to them.	3.3158	1.2288	5	Medium
Employees avoid relationships that may cause them to lose objectivity and be subject to the dominance of other parties.	3.5702	1.2618	2	Medium
The existence of relationships lacking objectivity and independence when performing tasks.	2.5526	1.1058	3	Medium
Overall mean	3.3087	1.1883		Medium

3.8.6. Laws and Regulations

Table 7 indicates that all importance levels for the variable of laws and regulations were high in terms of impact, with arithmetic means ranging from 4.2105 to 3.8246. The overall result here indicates

a high level of impact of laws and regulations on the quality of internal auditing in The Iraqi Housing Funds from the perspective of the study sample. The overall arithmetic mean of the responses regarding this axis was (3.9561). The standard deviation was (1.0659), indicating a relatively high degree of agreement among the respondents.

Table 7.
Mean and standard deviation of laws and regulations.

Statements	Mean	Standard deviation	Rank	Importance Level
The company complies with the requirements of laws and regulations related to its operations.	3.8333	0.93994	3	High
There are laws and regulations that clarify the rights and obligations of shareholders (such as the right to vote and the right to elect members of the board of directors).	4.2105	1.0085	1	High
The rights of the community to the company and its obligations towards the community are clarified.	3.8246	0.9430	4	High
Commitment to the applicable laws and regulations is observed.	3.9561	1.3722	2	High
Overall mean	3.9561	1.0659		High

3.8.7. Internal Audit

Table 8 indicates that the variable of internal audit comprises three sets of questions. The first set, consisting of the first six items, relates to the competency indicator. The second set, which includes the following four items, pertains to the objectivity indicator. The third set, comprising the last five items, is related to the performance quality indicator. The table shows the following:

a) The arithmetic means for the competency indicator ranged from 4.6228 to 4.2281, with an overall arithmetic mean of (4.4283) and a standard deviation of (0.5142). This suggests a relatively high degree of agreement and similarity among the responses of the study sample.

b) The arithmetic means for the objectivity indicator ranged from 4.3947 to 3.7544, with an overall arithmetic mean of (4.0329) and a standard deviation of (0.5878). This suggests a moderate level of agreement among the responses of the study sample.

c) The arithmetic means for the performance quality indicator ranged from 4.1140 to 3.4561, with an overall arithmetic mean of (3.9315) and a standard deviation of (0.3850). This suggests a relatively high degree of homogeneity among the responses of the study sample. Additionally, the overall arithmetic mean for all items related to the internal audit quality variable was (4.130), with a standard deviation of (0.4956). These results reflect the convergence of views among the study sample regarding the high importance of the aforementioned indicators collectively in internal audit quality.

Table 8.
Mean and standard deviation of internal audit variables.

Statements	Mean	Standard deviation	Rank	Importance level
The auditor's educational level contributes to improving their performance.	4.2632	0.44229	5	high
Obtaining a professional certification enhances the internal auditor's performance.	4.4825	0.50190	3	high
Continuing education for the auditor improves their professional performance.	4.6053	0.49095	2	high
Professional experience in internal auditing enhances the performance of the internal auditor.	4.2281	0.67882	6	high
Knowledge of the company's operations and	4.3684	0.48451	4	high

procedures improves the internal auditor's performance.				
The internal auditor's technical training and preparation improve their performance level.	4.6228	0.48682	1	high
Overall mean for the competency indicator	4.4283	0.5142		high
Submitting the internal audit report to upper management and the audit committee helps improve the performance of the audit function.	3.8509	0.5984	3	high
The appointment, compensation, promotion, and termination of internal auditors by upper management and the audit committee contribute to improving the performance of the internal audit function.	3.7544	0.6593	4	high
The involvement of external parties in performing internal audit tasks improves the quality of the internal audit function.	4.1316	0.6025	2	high
The internal auditor's connection to upper management contributes to improving their performance level.	4.3947	0.4909	1	high
Overall mean for the objectivity indicator	4.0329	0.5878		high
The accuracy and efficiency of internal audit programs improve the performance of the internal audit function.	4.0000	0.05060	3	high
The internal auditor's exercise of due professional care in performing their tasks improves the performance of the internal audit function.	3.9737	0.50590	4	high
Upper management's support for the internal audit function helps improve its performance.	4.1140	0.3192	1	high
The review of performance by parties outside the company contributes to improving the performance level of the internal audit function.	4.1140	0.3192	1	high
The adequacy and scope of internal audit work lead to the achievement of the performance of the internal audit function.	3.4561	0.7303	5	medium
Overall mean for the performance quality indicator	3.9315	0.3850		high
Overall mean for the internal audit variable	4.130	0.4956		high

3.9. Testing the Main Hypothesis

To test this hypothesis, a multiple linear regression analysis was conducted to assess the impact of internal auditing on enhancing government institution performance across dimensions of disclosure and transparency, accountability, responsibility, justice, independence, and adherence to laws and regulations.

Table 9.

Results of multiple regression analysis for the internal audit variable in improving the performance of government institutions.

Dependent variable	R (Correlation coefficient)	R² (Coefficient of determination)	F- calculated	DF (Degrees of freedom)	Sig* (Significa nce level)	β (Regression coefficient)	Sig* (Significance level)
Internal audit	0.647	0.42	2.29	Between groups: 1	0.000		
Disclosure and transparency						0.262	0.000
Accountability						0.151	0.000
Responsibility						0.133	0.000
Justice						0.239	0.000
Independence						0.144	0.000
Laws and regulations						0.251	0.000
Residuals				112			
Total				113			

Note: The results are statistically significant at the 0.05 level.

The data presented in Table 9 reveals a statistically significant positive relationship between all internal audit components and improved government institution performance across the examined dimensions. The multiple correlation coefficient (R) of .647 indicates a moderate correlation, while the coefficient of determination (R^2) of 42% suggests that 42% of the variation in overall performance improvement can be attributed to changes in internal auditing practices. The calculated F-value of 2.29, significant at the 0.05 level, further confirms the substantial impact of internal auditing on government institution performance.

Table 10 confirms previous findings. The F-test yielded a significant result ($F = 2.999$, $p < .05$), indicating that implementing internal auditing positively impacts government institutions, particularly enhancing disclosure, transparency, accountability, responsibility, justice, independence, and compliance within the Iraqi Housing Fund.

To verify the role of internal control and auditing in improving the performance of government institutions, specifically in the Iraqi Housing Fund, the main hypothesis was divided into six sub-hypotheses. Simple regression analysis was used to test each sub-hypothesis individually, as will be presented later.

Table 10.

ANOVA results of the role of internal control and auditing in improving the performance of government institutions in the Iraqi housing fund.

Variable	Source of variation	Degrees of freedom (df)	Sum of squares	Calculated F-value	Critical F-value	Significance level (Sig)	Result
Improving the Performance of Government Institutions	Between Groups	1	0.104	2.999	2.290	0.000	Reject Null Hypothesis
	Within groups	112	5.062				
	Total	113	5.166				

3.10. Testing the First Sub-Hypothesis

Table 11 demonstrates a statistically significant positive relationship between internal auditing and disclosure and transparency. The correlation coefficient (R) of .775 indicates a strong correlation, while the coefficient of determination (R^2) of 60% suggests that 60% of the variation in internal audit quality can be attributed to changes in disclosure and transparency levels. The calculated F-value of 3.226, significant at the 0.05 level, supports the rejection of the null hypothesis and acceptance of the alternative hypothesis. This confirms that implementing internal auditing significantly impacts disclosure and transparency, thereby enhancing the performance of government institutions, specifically the Iraqi Housing Fund.

Table 11.

Results of simple regression analysis for internal audit and disclosure and transparency.

Dependent variable	R (Correlation coefficient)	R^2 (Coefficient of determination)	F-calculated	DF (Degrees of freedom)	Sig* (Significance level)	t-calculated	Sig* (Significance level)
Internal audit	0.775	0.60	3.226	Between Groups: 1	0.000	47.072	0.000
Residuals				112			
Total				113			

Note: The results are statistically significant at the 0.05 level.

3.11. Testing the Second Sub-Hypothesis

Table 12 demonstrates a statistically significant positive relationship between internal auditing and accountability. The correlation coefficient (R) of .638 indicates a moderate correlation, while the coefficient of determination (R^2) of 41% suggests that 41% of the variation in internal audit quality can be attributed to changes in accountability levels. The calculated F-value of 4.652, significant at the 0.05 level, supports the rejection of the null hypothesis and acceptance of the alternative hypothesis. This confirms that implementing internal auditing significantly impacts accountability, thereby enhancing the performance of government institutions, particularly within the Iraqi Housing Fund.

Table 12.
Results of simple regression analysis for internal audit and accountability.

Dependent variable	R (Correlation coefficient)	R^2 (Coefficient of determination)	F-calculated	DF (Degrees of freedom)	Sig* (Significance level)	T-calculated	Sig* (Significance level)
Internal audit	0.638	0.41	4.652	Between Groups: 1	0.000	42.971	0.000
Residuals				112			
Total				113			

Note: The results are statistically significant at the 0.05 level.

3.12. Testing the Third Sub-Hypothesis

Table 13 indicates a significant statistical relationship between internal auditing and responsibility. The correlation coefficient (R) of .531 suggests a moderate positive relationship, while the coefficient of determination (R^2) of 28% indicates that 28% of the variation in internal audit quality can be attributed to changes in responsibility levels. The calculated F-value of 2.643, significant at the 0.05 level, supports the rejection of the null hypothesis. This confirms that implementing internal auditing significantly impacts responsibility, contributing to improved performance within the Iraqi Housing Fund.

Table 13.
Results of simple regression analysis for internal audit and "Responsibility"

Dependent variable	R (Correlation coefficient)	R^2 (Coefficient of determination)	F-calculated	DF (Degrees of freedom)	Sig* (Significance level)	T-calculated	Sig* (Significance level)
Internal audit Quality	0.531	0.28	2.643	Between Groups: 1	0.000	49.307	0.000
Residuals				112			
Total				113			

Note: The results are statistically significant at the 0.05 level.

3.13. Testing the Fourth Sub-Hypothesis

Table 14 reveals a significant statistical relationship between internal auditing and justice. The correlation coefficient (R) of .678 indicates a substantial positive correlation, while the coefficient of determination (R^2) of 46% suggests that 46% of the variation in internal audit quality can be attributed to changes in justice levels. The calculated F-value of 5.822, significant at the 0.05 level, supports the rejection of the null hypothesis. This confirms that implementing internal auditing significantly impacts justice, contributing to improved performance within the Iraqi Housing Fund.

Table 14.
Results of simple regression analysis for internal audit and "Justice".

Dependent variable	R (Correlation Coefficient)	R ² (Coefficient of Determination)	F-calculated	DF (Degrees of freedom)	Sig* (Significance level)	T-calculated	Sig* (Significance level)
Internal audit quality	0.678	0.46	5.822	Between Groups: 1	0.000	52.118	.000
Residuals				112			
Total				113			

Note: The results are statistically significant at the 0.05 level.

3.14. Testing the Fifth Sub-Hypothesis

Table 15 indicates a significant statistical relationship between internal auditing and independence. The correlation coefficient (R) of .581 suggests a moderate positive correlation, while the coefficient of determination (R²) of 34% indicates that 34% of the variation in internal audit quality can be attributed to changes in independence levels. The calculated F-value of 4.370, significant at the 0.05 level, supports the rejection of the null hypothesis. This confirms that implementing internal auditing significantly impacts independence, contributing to improved performance within the Iraqi Housing Fund.

Table 15.
Results of simple regression analysis for internal audit and independence.

Dependent variable	R (Correlation coefficient)	R ² (Coefficient of determination)	F-calculated	DF (Degrees of freedom)	Sig* (Significance level)	T-calculated	Sig* (Significance level)
Internal audit quality	.581	.34	4.370	Between Groups: 1	0.000	54.945	.000
Residuals				112			
Total				113			

Note: The results are statistically significant at the 0.05 level.

3.15. Testing the Sixth Sub-Hypothesis

Table 16 demonstrates a significant statistical relationship between internal auditing and adherence to laws and regulations. The correlation coefficient (R) of .721 indicates a substantial positive correlation, while the coefficient of determination (R²) of 52% suggests that 52% of the variation in internal audit quality can be attributed to changes in compliance with laws and regulations. The calculated F-value of 10.459, significant at the 0.05 level, supports the rejection of the null hypothesis. This confirms that implementing internal auditing significantly impacts adherence to laws and regulations, contributing to improved performance within the Iraqi Housing Fund [34].

Table 16.
Results of simple regression analysis for internal audit and laws and regulations.

Dependent Variable	Correlation coefficient (R)	Coefficient of determination (R ²)	Calculated F-value	Degrees of freedom (DF)	Significance level (Sig*)	Calculated T-value	Significance level (Sig*)
Internal audit quality	.721	.52	10.459	Between Groups: 1	0.000	50.027	.000
Residuals				112			
Total				113			

4. Conclusion

The study investigates the impact of internal auditing on government institution performance.

- **Strong governance foundation:** Effective government performance hinges on robust practices and procedures aligned with strategic objectives.
- **Internal auditing as a value-add:** Internal auditing plays a crucial role in enhancing governance by providing information, assessing controls, and ensuring compliance.
- **Overall positive impact:** Internal auditing significantly contributes to improved government performance across multiple dimensions (disclosure, transparency, accountability, responsibility, justice, independence, and adherence to laws and regulations), explaining 42% of performance variance.
- **Specific factor impacts:** Internal auditing has a statistically significant positive impact on each individual performance dimension, with disclosure and transparency demonstrating the strongest correlation (60% explained variance) followed by laws and regulations, justice, accountability, independence, and responsibility.

5. Recommendations

Based on the findings of this study, the following recommendations are proposed:

1. The Iraqi Housing Fund should continue to adhere to internal control and auditing, and work to develop and improve the professional competence of auditors through training programs and encouraging them to keep up with the latest developments in their field.
2. Efforts should be made to strengthen the role and independence of the board of directors and the audit committee to enable them to carry out their assigned tasks. This is to avoid the negative impacts that institutions may face due to the weakness of the practical aspects of internal auditing principles within them and the negative repercussions on the performance of government institutions.
3. Government institutions should develop a code of ethics for the internal auditing profession, define ethical policies and distribute them throughout the company, and train auditors to enhance their ability to address difficult ethical dilemmas.
4. Internal auditors need to understand, study, and analyze the elements that contribute to improving the performance of government institutions. This is a crucial foundation for ensuring the success of the auditing process.
5. Further research should be conducted to explore other aspects of the relationship between improving the performance of government institutions and internal auditing, in order to enhance the performance of government institutions and detect cases of fraud, embezzlement, and mismanagement.

Acknowledgments:

We want to thank all who helped, supported, and advised us to start and complete publishing this paper from the College of Physical Education and Sport Science, University of Karbala, Karbala, Iraq.

Copyright:

© 2024 by the authors. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

References

- [1] C. Freeland, Basel Committee Guidance on Corporate Governance for Banks, paper presented to: Corporate Governance and Reform: Paving the Way to Financial Stability and Development, in: Corp. Gov. Reform Paving W. to Financ. Stab. Dev., Egyptian Banking Institute, Cairo, May, 2007.
- [2] IIA, "Exposes New Internal Audit Definition", *Intern. Audit.* 56 (1999) 13–14.
- [3] H. Al-Tamimi, *Introduction to Auditing: Theoretical and Practical*, Kahlon Book Center, Amman, 1998.
- [4] D.M. Guy, C.W. Alderman, A.J. Winters, *Auditing*, 5th ed., Harcourt College Pub, USA, 1999.
- [5] D. Archambeault, "The Relation between Corporate Governance Strength and Fraudulent Financial Reporting": Evidence from SEC Enforcement Cases, Prentice-Hall International, Inc, 2000.

- <https://www.proquest.com/openview/dec7c98051d473d972304f9e5f41359a/1?pq-origsite=gscholar&cbl=18750&diss=y>.
- [6] J. Cohen, G. Krishnamoorthy, A. Wright, The Corporate Governance Mosaic and Financial Reporting Quality, *J. Account. Lit.* (2004) 87–152. <https://ssrn.com/abstract=1086743>.
- [7] IIA, International Standards, for the Professional Practice of Internal Auditing, Altamonte Springs, Altamonte Springs, FL (2003). <http://www.theiaa.org/ecm/guideframe>.
- [8] W. Jr Messier, S. Glover, D. Prawitt, *Auditing & Assurance Services: A Systematic Approach*, 2nd ed., McGraw-Hill, New York, 2000.
- [9] AICPA, The Auditors' Consideration of the Internal Audit Function in an Audit of Financial Statements, American Institute of Certified Public Accountants, New York, NY, 1991. <https://us.aicpa.org/content/dam/aicpa/research/standards/auditattest/downloadabledocuments/au-00322.pdf>.
- [10] IIA, Simply Good Business. Tone at the Top, Altamonte Springs, FL. (2003). <http://www.theiaa.org/ecm/guideframe>.
- [11] I. Al-Issawi, *Development in a changing world: a study of the concept of development and its indicators*, Al-Shorouk Publishing House, Cairo, 2001.
- [12] Q. Williamson, E., *The Mechanism of Governance*, Oxford University Press, Oxford, 1999.
- [13] OECD, *Principles of Corporate Governance*, (2023). <https://doi.org/10.1787/ed750b30-en>.
- [14] Japan committee, Japan committee, Corporate Governance Forum, Japan Corp. Gov. Comm. (2001). <http://www.japan.org>.
- [15] N.S. Khoury, The Accounting Profession between Financial Trouble and Institutional Control in Companies, *Al Bayan Newsp.* (2003).
- [16] M. Matar, The Role of Disclosing Accounting Information in Promoting and Activating Institutional Arbitration, *Jordanian Society of Certified Public Accountants*, in: Fifth Prof. Sci. Conf., Jordanian Society of Certified Public Accountants, Amman, Jordan, 2003.
- [17] S. Fawzy, Assessment of Corporate Governance in Egypt, The Egyptian Center for Economic Studies, Egypt, 2003. <https://eces.org.eg/wp-content/uploads/2023/07/Assessment-of-Corporate-Governance-in-Egypt-WP82-April-2003.pdf>.
- [18] D.R. Hermanson, L.E. Rittenberg, *Internal Audit and Organizational Governance*, 2003.
- [19] A.B. Carroll, The Pyramid of Corporate Social Responsibility: Toward the Moral Management of Organizational Stakeholders, *Bus. Horiz.* 34 (1991) 39–4. [https://doi.org/10.1016/0007-6813\(91\)90005-G](https://doi.org/10.1016/0007-6813(91)90005-G).
- [20] A. Gill, Corporate Governance in Credit Lyonnais S.A (CLSA), *Assoc. Invest. Res.* (2003). www.clsa.com.
- [21] SOCPA, Guide to Professional Code of Conduct and Ethics, Saudi Organization for Certified Public Accountants, 2022. <https://socpa.org.sa/Socpa/Media-Center/News/2022/3530.aspx?lang=en-us>.
- [22] L.K.-H. Catherine, J.D. Sullivan, Afforesting The Corporate Governance in The Development and Rising and Transitional Economies, *CIPE* (2003). www.cipe.orgtopic/corruption.
- [23] J.F. Mutchler, Independence and Objectivity: A Framework for Research Opportunities in Internal Auditing, The IIA Research Foundation, 2003. <https://www.iiara.org.za/store/viewproduct.aspx?id=1667136>.
- [24] L. Zingales, *Corporate Governance*, NEBR working, Cambridge, Massachusetts, United States, 1997. https://www.nber.org/system/files/working_papers/w6309/w6309.pdf.
- [25] Z.K. Rezaee, G. Mimmier, Improving Corporate Governance: The Role of Audit Committee Disclosures", *Manag. Audit. J.* 18 (2003) 530–537. <https://doi.org/10.1108/02686900310482669>.
- [26] A.H. Jumaa, Institutional Control and Dimensions of Development within the Framework of Practicing the Internal Auditing Profession, in: Fifth Prof. Sci. Conf. under Slogan Institutional Control Facil. Contin., Jordanian Society of Certified Public Accountants, Amman, Jordan, 2003.
- [27] M. Mangena, R. Pike, The Effect of Audit Committee Shareholding, Financial Expertise and Size on Interim Financial Disclosures, *Account. Bus. Res.* 35 (2005) 327–549. <https://doi.org/10.1080/00014788.2005.9729998>.
- [28] R. Joshua, A Proposed Corporate Governance Reform: Financial Statements Insurance", *J. Eng. Technol. Manag.* 23 (2006) 130–146. <https://doi.org/10.1016/j.jengtecman.2006.02.009>.
- [29] I. Zwelf, K. Al-Jawhar, The Role of Commitment to Internal Control Elements in Strengthening the Foundations of Institutional Control", *J. Humanit. Res. Stud.* 20 (2007) 232–258.
- [30] M. Matar, A.N. Nour, The extent to which Jordanian public joint-stock companies adhere to the principles of improving the performance of government institutions: a comparative analytical study between the banking and industrial sectors, *Jordanian J. Bus. Adm.* 3 (2007) 46–71.
- [31] D. Fateh, B.B. Aishi, Corporate Governance as a Tool for Ensuring the Authenticity of Financial Information and Accounting Systems and Their Impact on the Level of Market Performance, in: Res. Present. to Third Sci. Conf. Coll. Econ. Adm. Sci., Applied Science Private University, Amman, Jordan, 2008.
- [32] S.K.M. Issa, Factors determining the quality of the internal audit function in improving the quality of corporate governance: with an applied study, *J. Fac. Commer. Sci. Res. Alexandria Univ.* 45 (2008) 1–57.
- [33] N. Malhotra, *Marketing Research*, in: Englewood Cliffs, N, 4th ed., Prentice-Hall, Inc, 2003.
- [34] H. Al-Qadi, *Internal Audit*, 1st ed., Damascus University Publications, Damascus, 2008.