IT GOVERNANCE AND AUDIT RISK IN JORDANIAN COMPANIES: THE MODERATING ROLE OF AUDIT QUALITY

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ABSTRACT

Purpose: In order to better understand how IT governance COBIT5 (planning and organization (PO), acquisition and implementation (AI), support and delivery (SD), monitoring and evaluation (ME), guidance and control (GC), and audit risks interact in Jordanian businesses, this study will examine the moderating role of audit quality.

Design/methodology/approach: This study uses a mixed method combining quantitative and qualitative method.

Primary data: IT governance and audit risk with questionnaires distributed to 528 workers from each of the 176 Jordanian companies. The three employees served as a representative sample from the finance, internal audit, and IT departments. Secondary data: Using SPSS software, the data was analyzed to determine the audit quality using the financial statements of Jordanian businesses listed on the Amman Stock Exchange for the year 2020.

Results and conclusion: The results of this study have shown that the COBIT5 framework is an important accountability mechanism for motivating expected behavior in the workplace when it comes to technology use. Audit risk is directly affected by the IT governance structure.

Practical implications: This study is important for companies in Jordan, by presenting an integrated framework in this study that combines IT governance, audit risks and audit quality. This study was expected to facilitate the companies’ efforts by ensuring a sufficient degree of confidence in the applied accounting system and improving the information security within the system to maintain the organizations and audit quality at the same time.

Originality/value: This study adds to the body of knowledge on IT governance, audit risk, and audit quality that has concentrated on developing nations, particularly Jordan.

Keywords: IT Governance, Audit Risk, Audit Quality.

GOVERNANÇA DE TI E RISCO DE AUDITORIA EM EMPRESAS JORDANAS: O PAPEL MODERADOR DA QUALIDADE DE AUDITORIA

RESUMO

Objetivo: Para compreender melhor como a governança de TI COBIT5 (planejamento e organização (PO), aquisição e implementação (AI), suporte e entrega (SD), monitoramento e avaliação (ME), orientação e controle (GC) e os riscos de auditoria interagem nas empresas jordanianas, este estudo examinará o papel moderador da qualidade da auditoria.

Projeto/metodologia/abordagem: Este estudo utiliza um método misto que combina métodos quantitativos e qualitativos.

Dados principais: controle de TI e risco de auditoria com questionários distribuídos a 528 funcionários de cada uma das 176 empresas jordanianas. Os três funcionários serviram como uma amostra representativa dos...
departamentos de finanças, auditoria interna e TI. Dados secundários: Utilizando o software SPSS, os dados foram analisados para determinar a qualidade da auditoria utilizando as demonstrações financeiras de empresas jordanas listadas na Bolsa de Valores de Amã para o ano de 2020.

**Resultados e conclusão:** Os resultados deste estudo mostraram que a estrutura COBIT5 é um importante mecanismo de prestação de contas para motivar o comportamento esperado no local de trabalho quando se trata de uso de tecnologia. O risco de auditoria é diretamente afetado pela estrutura de controle de TI.

**Implicações práticas:** este estudo é importante para as empresas na Jordânia, apresentando uma estrutura integrada neste estudo que combina governança de TI, riscos de auditoria e qualidade de auditoria. Esperava-se que este estudo facilitasse os esforços das empresas, garantindo um grau suficiente de confiança no sistema de contabilidade aplicado e melhorando a segurança da informação dentro do sistema para manter as organizações e a qualidade da auditoria ao mesmo tempo.

**Originalidade/valor:** este estudo agrega-se ao corpo de conhecimento sobre governança de TI, risco de auditoria e qualidade de auditoria que tem se concentrado em países em desenvolvimento, particularmente na Jordânia.

**Palavras-chave:** Governança de TI, Risco de Auditoria, Qualidade de Auditoria.

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## 1 INTRODUCTION

The Hashemite Kingdom of Jordan is a small country with limited resources, as it enjoys stability and security compared to other neighboring countries, and the Jordanian economy ranks 89th in the world. (World GDP Ranking 2015 | Data and Graphs). However, the Jordanian economy is one of the smallest economies in the Middle East, as it suffers from a shortage of water, oil and other natural resources, and due to high production costs and high energy prices, it affects the competitiveness of local products in favor of foreign products. Goods, which form the basis of the government's heavy dependence on aid. external.

The whole world witnessed the occurrence of the global financial crisis in (2008), This in turn had an impact on Jordan's economy, which in turn had an impact on most of the world's economies, causing the Amman Stock Exchange to drop precipitously. by 40% (ASE, 2012). This prompted all professional bodies, specialists and interested countries to search for its causes. The problem and its impact on the economy of countries and finding appropriate solutions.

The management of these organizations' financial and administrative corruption, as well as weaknesses in corporate governance and risk management systems, are the root causes of this disaster. The 2007–2008 financial crisis was significantly influenced by corporate governance in financial institutions. In addition to the computational models failing, there were also improper corporate governance frameworks, risk management protocols, and board duties. As Jordan was one of the first countries to adopt the IT Governance Guide to help companies monitor business and control errors, as it obligated all companies listed on the ASE to work with it, including public shareholding companies.

IT governance is also a critical component of the successful implementation of good governance. Governance assesses the effectiveness and efficiency with which a company's business processes are improved through IT-related structures. The benefits to a company that implements IT governance include improved risks and resources. (Audia, & Sugiantoro, 2022; Junior–taba, et al., 2023)), The creation of a framework that can serve as a guide for improving
IT management is required for measuring IT governance. COBIT5 is one of the key frameworks for practices that may be used to assess IT governance (Control Objective for Information and Related Technology). (Toifur et al., 2022). ISACA's COBIT5 is the best framework for "governance", Enterprise and IT Management. (Joshi, et al, 2022).

In order to bridge the gap between business risks, control requirements, and IT technical concerns, COBIT5 provides a broad and complete spectrum of interrelated IT processes. It can also be coupled with other frameworks (Rusman et al., 2022), allowing auditors to make quick decisions about value, risk, and control. There are five core dimensions of cobit5 that help management and the company to improve the internal control system, namely: Planning and Organizing (PO), Acquisition and Execution (AI), Support and Delivery (SD), Monitoring and Evaluation (ME) and Guidance and Control (GC). Many studies on this topic have largely evolved from agency theory. Initially created as a framework for completing IT audit assignments, COBIT 5 is based on a comprehensive set of control objectives for IT processes (De Haes et al, 2020).

And because of the crises that occurred in 2008, which made the role of auditing and the performance of auditors a matter of discussion. Where some found that the role of the auditing profession is to add confidence to the financial statements and not to confirm the future of companies and that there seems to be a lack of understanding in the auditing process and what is really the auditor. In light of these standards and the crisis, many questions began to be raised about the role of the auditing profession (Abu Alim, 2016).

A study (Lee et al., 2006) found that the use of IT governance in auditing increases the effectiveness of the planning stage and improves the auditor's analytical procedures. It also increases the quality of auditing and documentation work, in addition to obtaining high-quality evidence that supports the auditor’s impartial technical opinion regarding the fairness of the financial statements, as shown by a study (Hasan et al., 2020). IT governance is one of the main pillars for reducing audit risks, and she indicated its role in improving the quality of operations, products and services provided to companies, as IT governance contributes to data processing, analysis and management. Well, as a guarantee of risk reduction, IT governance provides a framework for decision-making as to how to balance conflicting needs: to allocate scarce resources, to allocate risks, and to determine how best to reduce or mitigate those risks (Penn et al., 2021; Stoel et al., 2012).

A high-quality audit requires that each significant risk has been identified and then assessed based on its materiality and likelihood of occurrence, as well as its impact on the financial statements (Fakhfakh & Jarboui, 2020), Audit quality is very important to stakeholders as because they are doing not just want to see an unqualified audit opinion, but they also expect an appropriate level of audit quality as approved and highlighted by auditors. This study attempts to identify the role of audit quality in moderating the relationship between IT Governance (Cobit5) and Audit Risk in Jordanian firms. There are five sections in the essay. The introduction is included in part one, followed by a review of related literature in section two, data and methods in section three, findings and discussion in section four, and the conclusion in section five.

2 LITERATURE REVIEW

2.1 IT Governance (cobit5)

The problem of IT governance has grown significantly in importance among businesses in recent years. IT has grown to be a vital part of business operations in order to support, maintain, and grow companies. In the context of business, governance refers to a set of guidelines, procedures, and activities that an organization uses to decide on its plans and run
the company with a focus on achieving its objectives (Sasaki & Yonezawa, 2010). While organizational frameworks and procedures that guarantee the organization's IT fully supports its objectives are referred to as IT Governance (Andry et al., 2018, Sethibe et al., 2007).

The degree of organizations' commitment to apply the general framework for IT effectiveness has become one of the most fundamental standards that investors consider when making their investment decisions, especially in light of economic globalization and intense competition between different organizations to enter the financial markets, locally or globally for investment, where Control environments and organizations lacking IT governance are more susceptible to fraud, abuse, and misuse (De Haes et al., 2013; Mahadeen et al., 2016).

COBIT 5 is a best practices framework that may be used as a guide for adopting IT governance and management in order to ensure that IT investments give the highest value to the company in terms of benefits, risks, and resources. COBIT offers a wide and comprehensive spectrum of interconnected IT processes to fill the gap between business risks, control needs, and technical IT problems. Additionally, it may be connected to other frameworks. (Rusman et al., 2022)

Auditors should utilize the 34 high-level control objectives that the COBIT 5 framework provided to certify that adequate security controls are in place for the IT environment. The inclusion of a comprehensive IT internal control checklist also makes it easier for CPAs to assess the businesses' IT internal controls. For the purpose of regulatory compliance analysis, this checklist may be used to thoroughly assess both IT general controls and application controls (Lin et al., 2010).

2.2 IT Governance (cobit5) and Audit Risk

IT governance provides a framework for the decision-making process regarding how to balance conflicting needs: to allocate scarce resources, allocate risks, and determine how best to limit or mitigate those risks (Penn et al., 2021). Several scholars have studied the relationship between IT implementation and audit effectiveness and risk (Al-Dalabih & Al-Sharairi, 2019; Al-Qudah, 2021). IT governance had a positive impact on reducing audit risks. However, some researchers concluded that using IT could boost audit-related risks, so auditors would be well advised to keep up with technology development and to broaden their knowledge and skills (Monteiro & Cepêda, 2021; Tarek et al., 2017).

In essence, recent research has shown that IT governance frameworks such as COBIT can play an important role in audit control and audit process effectiveness. According to Al-Shara (2018), the application of the COBIT system in terms of its dimensions (PO, AI, SD, ME, GC) has a statistically significant effect on the efficiency of the internal control and audit system in Jordanian public joint-stock companies. Looking at the specific components of COBIT 5, a study by Mutiara et al. (2017) clarified that there are many benefits arising from using the Planning and Organization process, most notably the application of the objectives of information and technology control and the work of planning and organizing to raise the efficiency of the process of monitoring the risks of electronic auditing processes, which leads to a direct impact on business. Furthermore, Ali et al. (2019) discovered a positive relationship between Acquisition and Implementation on the efficiency of internal control systems in Jordanian industrial firms. Okour (2019) discovered a strong link between the Support and Delivery phase and the reduction of cloud computing risk. Similarly, Ali et al. (2019) discovered that this phase has a positive effect on internal control system reduction. Al-Fatlawi et al. (2021) found that stated that to reduce the risks associated with items in the financial statements, the bank has implemented a monitoring and evaluation structure that is complementary to the complexity of the threats it could face. Okour (2019) noticed that
effective guidance and control significantly reduce the risk inherited. Based on prior study’s findings the hypotheses are therefore stated as follows:

H1: Information technology governance and audit risk

H1. a: Planning and Organization process to reduce Audit Risk in Jordanian companies
H1. b: Acquisition and Implementation process to reduce Audit Risk in Jordanian companies
H1. c: Support and Delivery process in reducing Audit Risk in Jordanian companies
H1. d: Monitoring and Evaluation process to reduce Audit Risk in Jordanian companies
H1. e: Guidance and Control to reduce Audit Risk in Jordanian companies.

2.3 Audit Quality and Audit Risk

During the period 1995 to 2003, many companies were subjected to bankruptcy and collapse. This was accompanied by the filing of many cases against the accounting and auditing offices that undertook the review of these companies as there was nothing in their reports (a statement or a hint) indicate that the future of these companies is in danger. Among the most recent and well-known cases in this field are the bankruptcy and collapse of the two American companies, Enron, and WorldCom, the second largest US telecom company.

As a result of these scandals, public confidence in financial reports, corporate management, independent auditing companies, and capital markets has decreased, and the caliber of the audit profession’s work has been questioned (Kilgore et al., 2011). Audit quality is very important to stakeholders as because they are doing not just want to see an unqualified audit opinion, but they also expect an appropriate level of audit quality as approved and highlighted by auditors.

A high-quality audit requires that each significant risk has been identified and then assessed based on its materiality and likelihood of occurrence, as well as its impact on the financial statements (Fakhfakh & Jarboui, 2020). Based on this assumption, Lin et al. (2010) claimed that a high-quality audit can lower the risk of substantial misstatements or omissions in financial reports by discouraging opportunistic earnings management.

Audit risk was defined by the American Institute of Certified Public Accountants (AICPA) in Bulletin 47 as "the risk that the auditor will unknowingly fail to make a reservation in his report when there is a material misstatement of the financial statements." According to (Arens 2017), the risk audit process consists of three components: inherent risk, control risk, and detection risk. In a nutshell, several studies have been conducted in order to investigate the relationship between audit quality and audit risk, which revealed that there is a strong relationship between them (Ashibogwu & Ogbolu, 2020; Cahan et al., 2021; Fakhfakh & Jarboui, 2020). Audit fees are another proxy variable used to determine audit quality (Bacha et al., 2020).

In many studies that find a link between audit quality and risk, audit fees are used as a proxy for audit quality. (Beisland et al., 2015; Salehi et al., 2019).

A high-quality audit requires that each significant risk has been identified and then assessed based on its materiality and likelihood of occurrence, as well as its impact on the financial statements (Fakhfakh & Jarboui, 2020). Based on this assumption, Lin et al. (2010) claimed that a high-quality audit can lower the risk of substantial misstatements or omissions in financial reports by discouraging opportunistic earnings management. Based on prior study’s findings the hypotheses are therefore stated as follows:

H2: The relationship between Audit Quality (Audit Fees) and Audit Risk

IT is becoming increasingly important in assisting modern organizations in achieving their objectives, and it is crucial in developing and executing efficient IT governance
mechanisms (Al Hosban, 2015) In the audit function, technology-related auditing is a high priority, especially regarding utilizing audit technology (Christensen, 2016).

As part of IT governance practices, IT within the Cobit5 framework will reduce the audit process time. IT governance does not just reduce the audit effort. It also assists in the effective and efficient use of IT. This helps achieve project and financial goals by reducing unplanned expenses and administrative overheads (Al-Fatlawi et al., 2021; Neto, 2023). Furthermore, theoretical and empirical evidence proved that IT under proper governance could reduce audit risk (Lee et al., 2016; Umar et al., 2017).

According to Fields et al. (2004), IT governance is not directly related to audit fees, but it does suggest that strong internal audit committee monitoring can reduce the risks inherent in banks, potentially leading to greater audit efficiency. Technology can improve the efficiency and effectiveness of audit work (Bierstaker et al., 2001). However, risk management at the board level and more vigilant audit committees can help to mitigate the risk-related audit fee premium. (Sharma et al., 2021).

According to several research, an effective COBIT framework can influence how governance and associated risk are related (Al-Hawamdeh, 2020; Haouam, 2020; Okour, 2019). Okour (2019) discovered, for example, that from the perspective of the Jordanian Certified Public Accountant, every element of the (COBIT5) Committee affects the reduction of cloud computing risk. Accountants who control identities and access, safeguard data, handle risks associated with virtual operations, provide IT assistance, and organize the public shares of Jordanian enterprises. Similarly, Haouam (2020) stated that IT governance is linked to the four dimensions of financial reporting quality in the COBIT framework. These dimensions and the quality attributes of financial reporting have been shown to have a beneficial relationship. Based on the results of the previous study, the hypothesis is stated as follows:

**H3: Audit Quality Moderates the Relationship between IT Governance and Audit Risk**

### 3 POPULATION AND SAMPLING

The population of this study is Jordanian Companies Listed on the Amman Stock Exchange 2019 end of December, 176 companies, which included three main sectors in Jordan: Financial companies, service companies and finally, industrial companies, the 528 respondents will consist of 3 employees from each of the 176 companies. Out of the 3 employees, will represent the finance department, the internal audit department and finally from IT department.

#### 3.1 Data collection

The study has adopted two types of basic data collection methods, namely:

**A - Primary Data:**

For this study, the questionnaire method was used for primary data (PO, AI, SD, ME, GC) and audit risk, was conducted using a quantitative approach, where questionnaires were distributed by hand to 528 of 3 workers from each of the 176 Jordanian companies. Out of the 3 workers, will represent the finance department, the internal audit department and finally from IT department as a sample and 31 sets of questionnaires were returned with complete answers.

**B - Secondary Data:**

By knowing the audit fees for each company, the data was gathered from the annual reports of Jordanian companies listed on the Amman Stock Exchange as of May 2020.
3.2 Study Models

The link between independent factors and dependent variables will be modeled using linear multiple regression and stepwise regression in order to assess the aforesaid relationship. The influence of audit quality in modulating the connection between independent and dependent variables will also be examined using hierarchical regression. The following regression models can depict these relationships:

1- Regression model represents the relationship between independent and dependent variables:

\[ REA = a_0 + a_1 PO + a_2 OI + a_3 SC + a_4 ME + a_5 GC + e \]  

Where:

- \( REA \): represents audit risk
- \( PO \): represents planning and organization
- \( OI \): represents acquisition and implementation
- \( SC \): represents support and delivery
- \( ME \): represents monitoring and evaluation
- \( GC \): represents guidance and control
- \( e \): represents random error.
- \( a_i \): represents regression model coefficients.

2- Regression model represents the moderating role of audit quality on the relationship between independent and dependent variables:

\[ REA = b_0 + b_1 PO + b_2 OI + b_3 SC + b_4 ME + b_5 GC + b_6 PO*AQ + b_7 OI*AQ + b_8 SC*AQ + b_9 ME*AQ + b_{10} GC*AQ + e \]  

Where:

- \( AQ \): represents audit quality.
- \( PO*AQ \): represents the interaction between planning and organization and audit quality.
- \( OI*AQ \): represents the interaction between acquisition and implementation and audit quality
- \( SC*AQ \): represents the interaction between support and delivery and audit quality
- \( ME*AQ \): represents the interaction between monitoring and evaluation and audit quality
- \( GC*AQ \): represents the interaction between guidance and control and audit quality
- \( e \): represents random error.
- \( b_i \): represents regression model coefficients

4 RESULTS

4.1 Reliability Test

Data that's been gathered using a questionnaire as the instrument had their reliability put to the test. Its goal is to assess if respondents' replies to every question in the research are uniform. There is a measure of how closely two or more questions are related to one another based on the fact that they are independently measured measures of the same notion. Cronbach’s alpha was used to determine the reliability of the questions in the study for each variable. According to Schweizer (2011), Cronbach's alpha values over or equal to 0.70 are regarded as trustworthy, and dependability strength is calculated in the same manner by Hair et al (2016). Following is the Rule of Thumb for Cronbach’s Alpha, which serves as guidance, as shown in Table 4.1 below:
Table 4.1 The Cronbach’s Alpha Value

<table>
<thead>
<tr>
<th>Alpha</th>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;0.6</td>
<td>Weak (Not Acceptable)</td>
</tr>
<tr>
<td>0.6 - &lt;0.7</td>
<td>Moderate</td>
</tr>
<tr>
<td>0.7 - &lt;0.8</td>
<td>Good</td>
</tr>
<tr>
<td>0.8 - &lt;0.9</td>
<td>Very Good</td>
</tr>
<tr>
<td>0.9</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

*Fonte:* Hair et al. (2016)

Table 4.2 Cronbach’s alpha (α) reliability coefficients for the main constructs

<table>
<thead>
<tr>
<th>Variable</th>
<th>No. of item</th>
<th>Cronbach's Alpha</th>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning and Organization</td>
<td>11</td>
<td>0.972</td>
<td>Excellent</td>
</tr>
<tr>
<td>Acquire and implementation</td>
<td>7</td>
<td>0.928</td>
<td>Excellent</td>
</tr>
<tr>
<td>Support and Connectivity</td>
<td>7</td>
<td>0.992</td>
<td>Excellent</td>
</tr>
<tr>
<td>Monitoring and Evaluation</td>
<td>8</td>
<td>0.995</td>
<td>Excellent</td>
</tr>
<tr>
<td>Guidance and Control</td>
<td>8</td>
<td>0.992</td>
<td>Excellent</td>
</tr>
<tr>
<td>Internal Risk</td>
<td>4</td>
<td>0.825</td>
<td>Very Good</td>
</tr>
<tr>
<td>Control Risk</td>
<td>3</td>
<td>0.781</td>
<td>Good</td>
</tr>
<tr>
<td>Detection Risk</td>
<td>4</td>
<td>0.781</td>
<td>Good</td>
</tr>
</tbody>
</table>

Table 4.2 shows that the reliability coefficients for the variables are adequate in the absence of any deleted items, as indicated by the above-mentioned finding. All variables were acceptable because they had a p-value greater than 0.70. Aside from that, six variables score excellent in terms of reliability strength: PO (0.972), AI (0.928), SD (0.992), ME (0.995), and GC (0.995). A very high level of strength was demonstrated by Internal Risk (0.825), which was very good. While Control Risk (0.781) and Detection Risk (0.781) all scored above average on reliability criteria. There are no entries in the variable that need to be eliminated at this time. All variables had an acceptable level of dependability strength. As a result, The findings demonstrate that every variable construct satisfies the requirements for being deemed reliable.

4.2 Descriptive analysis

The findings of a descriptive analysis were presented in this section for each questionnaire component. Descriptive analysis is a crucial step in the examination and analysis of data. This analysis technique was utilized to interpret the respondents' pattern of replies in order to learn more about their make-up, mean, and standard deviation. The respondents' replies are covered in this section. This section will detail the extent to which each item has been planned and organized, purchased and carried out, supported and connected, monitored and evaluated, and guided and controlled. The audit fees' fee structure will also be described. The categorization of the rating scale will be used to investigate the magnitude of mean score for each item in variables. (see table 4.3):

Table 4.3: The Rating Score

<table>
<thead>
<tr>
<th>Rating score</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>1.0 ≤ Mean score ≥ 2.33</td>
</tr>
<tr>
<td>Moderate</td>
<td>2.34 ≤ Mean score ≥ 3.67</td>
</tr>
<tr>
<td>High</td>
<td>3.68 ≤ Mean Score ≥ 5.00</td>
</tr>
</tbody>
</table>

*Source:* (Ahmadi et al., 2014)
4.2.1 Level of IT Governance Variable

Table 4.4 has a rating of the mean score, which will be used to determine the degree of variables at this stage. Table 4.4 displays the mean score and standard deviation for each variable.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning and Organization</td>
<td>3.961</td>
<td>0.598</td>
<td>High</td>
</tr>
<tr>
<td>Acquire and implementation</td>
<td>3.880</td>
<td>0.470</td>
<td>High</td>
</tr>
<tr>
<td>Support and Connectivity</td>
<td>3.831</td>
<td>0.592</td>
<td>High</td>
</tr>
<tr>
<td>Monitoring and Evaluation</td>
<td>3.915</td>
<td>0.688</td>
<td>High</td>
</tr>
<tr>
<td>Guidance and Control</td>
<td>3.891</td>
<td>0.663</td>
<td>High</td>
</tr>
</tbody>
</table>

Planning and organization (Mean Score=3.961, Standard Deviation=0.598), acquire and implementation (Mean Score=3.880, Standard Deviation=0.470), support and connectivity (Mean Score=3.831, Standard Deviation=0.592), monitoring and evaluation (Mean Score=3.915, Standard Deviation=0.688), guidance and control (Mean Score=3.891, Standard Deviation=0.663) were the independent variables where the mean score of all variables was very high. Planning and organization are the two most crucial elements in the aforementioned descriptive result.

4.2.2 Level of audit risk variables

Table 4.5 contains a mean score rating that will be used to determine the degree of variables at this stage. Table 4.5 displays the mean score and standard deviation for each variable.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Risk</td>
<td>3.820</td>
<td>0.480</td>
<td>High</td>
</tr>
<tr>
<td>Control Risk</td>
<td>3.868</td>
<td>0.512</td>
<td>High</td>
</tr>
<tr>
<td>Detection Risk</td>
<td>3.933</td>
<td>0.469</td>
<td>High</td>
</tr>
</tbody>
</table>

There are three dependent variables to consider in this research study. Internal risk (Mean Score=3.820, SD=0.480), control risk (Mean Score=3.868, SD=0.512), and detection risk (Mean Score=3.933, SD=0.469), where the mean score of all variables was very high. In the above descriptive result, detection risk is the most important component, while internal risk is the least important.

4.3 Correlation Analysis

To assess the strength of the connection between each variable in this study, the researcher performed the Pearson Connection analysis. Correlation analysis is used to determine the strength and direction of the linear relationship between two variables when they are plotted against one another (Gujarati& Porter 2009). The strength and importance of a link between two variables are assessed using the degree of correlation. This was done using the bivariate association method. For statistically significant levels, the approach calculates Pearson's correlation coefficient. There is just one potential number for a Pearson correlation coefficient, and it might be anywhere between -1 and +1. Without taking into account the direction of the relationship, the absolute values of the two variables may be calculated to evaluate the strength of the association. According to the idea of 100% perfect correlation, one
variable's value may be perfectly calculated by knowing the value of another. The approaches for investigating the relationship proposed by (Botvinick & Cohen, 1998) are as follows.

According to Table 4.6, The dependent variables exhibit statistically significant and positive correlations with the independent components, according to the results of this relationship analysis.

<table>
<thead>
<tr>
<th>Table 4.6: Pearson Correlation Result</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PO</strong></td>
</tr>
<tr>
<td>PO</td>
</tr>
<tr>
<td>AI</td>
</tr>
<tr>
<td>SD</td>
</tr>
<tr>
<td>ME</td>
</tr>
<tr>
<td>GC</td>
</tr>
<tr>
<td>Internal Risk</td>
</tr>
<tr>
<td>Control Risk</td>
</tr>
<tr>
<td>Detection Risk</td>
</tr>
</tbody>
</table>

Note: ** and * indicate significant at 5% and 10%, respectively

4.4 Regression Analysis

The results of the regression analysis between IT governance and audit risk are shown in Table 4.8. The t-test resulted in a score of 21.282, with a p-value of 0.000. Because the p-value was less than 0.05, the results indicate that Hypothesis 1 was acceptable, and there was a statistically significant impact of effective IT governance in reducing audit risk in Jordanian companies. The beta value is 0.645, indicating that for every one percent increase in IT governance, there will be a 64.5% increase in audit risk. The findings of a regression analysis of the (PO) process and audit risk. The t-test resulted in a score of 15.387, with a p-value of 0.000. Because the p-value was less than 0.05, the result indicates that Hypothesis 1.1 was acceptable, and that there was a statistically significant impact of using an effective (PO) process in reducing audit risk in Jordanian companies. There will be a 38.3% increase in audit risk as a result. The findings of a regression analysis of the (AI) process and audit risk. The t-test resulted in a score of 15.387, with a p-value of 0.000. Because the p-value was less than 0.05, the results indicate that Hypothesis 1.2 was acceptable, and there was a statistically significant impact of implementing an effective (AI) process in reducing audit risk in Jordanian companies. There will be a 38.3% increase in audit risk as a result. The findings of a regression analysis of the (SD) process and audit risk. The t-test resulted in a score of 8.665, with a p-value of 0.000. Because the p-value was less than 0.05, the results indicate that Hypothesis 1.3 was acceptable, and there was a statistically significant impact of using an effective (SD) process in reducing audit risk in Jordanian firms. There will be a 24.7% increase in audit risk as a result. The findings of a regression analysis of the (ME) process and audit risk. The t-test resulted in a score of 12.518, with a p-value of 0.000. Because the p-value was less than 0.05, the result indicates that Hypothesis 1.4 was acceptable, and that there was a statistically significant impact of using an effective (ME) process in reducing audit risk in Jordanian companies. There will be a 28.7% increase in audit risk as a result. The findings of a regression analysis of the (GC) process and audit risk. The t-test yielded a result of 15.776, and the p-value for this test was 0.000. Because the p-value was less than 0.05, the result indicates that Hypothesis 1.5 was acceptable, and that there was a statistically significant impact of using an effective (GC) process in reducing audit risk in Jordanian companies. There will be a 35.2% increase in audit risk.
risk as a result. The findings of the regression analysis between audit quality and audit risk. The t-test resulted in a score of 48.949, with a p-value of 0.000. Because the p-value was less than 0.05, the result suggests that Hypothesis 2 was acceptable, and the impact of audit quality on audit risk in Jordanian companies was statistically significant. The beta value is 3.818, indicating that for every one percent increase in the difference between audit quality and audit risk, there will be an 81.8% increase in audit risk.

Table 4.8: The regression analysis result

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Beta</th>
<th>t-test</th>
<th>p-value (Sig.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT governance - audit risk</td>
<td>0.645</td>
<td>21.282</td>
<td>0.000</td>
</tr>
<tr>
<td>planning and organization process -</td>
<td>0.383</td>
<td>15.387</td>
<td>0.000</td>
</tr>
<tr>
<td>audit risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>acquire and implementation process -</td>
<td>0.383</td>
<td>15.387</td>
<td>0.000</td>
</tr>
<tr>
<td>audit risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>support and connectivity process -</td>
<td>0.247</td>
<td>8.665</td>
<td>0.000</td>
</tr>
<tr>
<td>audit risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>monitoring and evaluation process -</td>
<td>0.287</td>
<td>12.518</td>
<td>0.000</td>
</tr>
<tr>
<td>audit risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>guidance and control process -</td>
<td>0.352</td>
<td>15.776</td>
<td>0.000</td>
</tr>
<tr>
<td>audit risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>audit quality and audit risk -</td>
<td>3.818</td>
<td>48.949</td>
<td>0.000</td>
</tr>
<tr>
<td>audit risk</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.4.1 Moderating test

The moderating effects will be tested by implementing the (Baron & Kenny, 1986). Hierarchical Multiple Regression (HMR) analysis is appropriate, and the important point for According to the analysis’ findings, moderating effects will exist if their interaction with the dependent variable has a substantial value. The key point for both moderating relationships, according to Baron and Kenny (1986), is that a third variable significantly influences how two other variables interact with one another.

Table 4.9: HMR analysis between audit fees, IT governance and audit risk

<table>
<thead>
<tr>
<th>Model</th>
<th>Variable</th>
<th>R-Square</th>
<th>F</th>
<th>Sig.</th>
<th>Beta</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(constant) IT governance</td>
<td>0.478</td>
<td>452.905</td>
<td>0.000</td>
<td>0.691</td>
<td>11.449 21.282</td>
</tr>
<tr>
<td>2</td>
<td>(constant) IT governance</td>
<td>0.472</td>
<td>76.458</td>
<td>0.000</td>
<td>0.682</td>
<td>6.198   12.253 1.995</td>
</tr>
<tr>
<td>3</td>
<td>(constant) IT governance</td>
<td>0.480</td>
<td>52.378</td>
<td>0.000</td>
<td>0.829</td>
<td>1.98    7.861   2.743 2.671</td>
</tr>
</tbody>
</table>

The investigation into the moderating effects of the audit fees group on the relationship between IT governance and audit risk produced some conclusive results, that are shown in Table 4.9. When it comes to fitting data for audit fee categories, the model excels. As a result, F-tests for models 1, 2, and 3 have large values, and the p-value for the F-test for each model is less than 0.05. IT governance (t-test=21.282, p-value0.05) had a statistically significant effect on audit risk in the first model. In model 2, when audit fees are included, there is a significant association between audit fees (t-test= 1.995, p-value0.05) and IT governance (t-test= 12.253, p-value0.05) in terms of audit risk (t-test= 1.995, p-value0.05). In Model 3, the audit risk was influenced by IT governance and audit fees, among other factors. Audit risk is greatly increased when audit fees interact with IT governance in this paradigm, as the interaction has a considerable impact on audit risk. The interaction altered the degree to which the link between IT governance and audit risk was altered, as well as the direction in which the relationship was
altered. It's worth noting that Model 3 has a higher R-square than Models 1 and 2, with 0.48. This implies that the interaction between audit fees and IT governance accounts for 48% of audit risk variability. According to the findings, the interaction term, audit fees, moderates the relationship between effective IT governance and audit risk in Jordanian firms. The result confirmed that the H3 is acceptable.

4.5 Direct Effect and Moderation Effect of Audit fees

The findings in Table 4.7 revealed a statistically significant relationship between audit fees and IT governance (=0.682, p<0.05). As a result, H7 was accepted. The current study's findings are supported by Salehi et al., (2018) and Farooq et al., (2018). This study demonstrated that organizations that practice audit fees must always pay attention to the implementation of corporate principles in the operation of the economic entity. In other words, the audit fees in this study moderated the relationship between IT governance and audit risk. The interaction effect was found to be significant (p<0.05, =0.829). As a result, H8 was approved. According to the findings, the relationship between audit risk and IT governance appeared stronger when audit fees were higher, which was consistent with previous research findings (Eny & Mappayukki, 2020). Audit fees it can be a fruitful attempt to improve the IT governance of the organizations.

| Table 4.7: Significance of Path Coefficients for audit fees |
|---------------------------------|-----------------|----------|----------|
| Variable                        | Beta         | t-value | p-value |
| audit fees -IT governance       | 0.682        | 12.253  | 0.000    |
| audit risk* audit fees * IT     | 0.829        | 7.861   | 0.000    |

5 DISCUSSIONS, IMPLICATION AND FUTURE RESEARCH

The impact of COBIT5 on audit risk is specific to this study because no other studies have examined the proposed relationship in the context of public sector auditing. The COBIT5 mechanism is comprised of planning and organization, acquisition and implementation, support and connectivity, monitoring and evaluation, and guidance and control, all of which are significant factors influencing audit risk in Jordanian companies. This study used the SPSS technique to test the hypotheses. By evaluating the validity and reliability of concept measurements, the study looks at the quality of the measure. The results show that the metrics used in the study have both convergent and discriminant validity. The primary goal of this study is to investigate the role of Audit Quality as a moderator in the relationship between IT Governance (PO, AI, SD, ME, and GC) and Audit Risk in Jordanian companies. This study adds significantly to the literature review on the role of IT (COBIT) governance in Jordanian companies by utilizing its dimensions. This current study will add to existing knowledge about the effectiveness of IT governance in reducing audit risks in Jordanian companies. According to the study's findings, the COBIT5 framework is an important accountability mechanism for inducing expected behavior in the workplace when it comes to technology usage. The audit technology performance is directly influenced by the IT governance structure. As a result, organizations should reinforce the COBIT 5 system by defining decision powers and an accountability structure for organizations auditors to encourage good audit behavior. On the other hand, management must provide sufficient backing through efficient planning and sufficient funding to ensure the audit process's successful use of audit technology. In order to enable successful audit technology usage, management should also learn and execute the demands and constraints placed on its use as well as give explicit support and connectivity.
Furthermore, management should monitor and evaluate audit technology in order to reduce audit risk. Guidance and control may be easier to optimize the effectiveness of audit efforts with active management assistance and clear roles. This conclusion states that efficient COBIT5 is expected to improve auditors’ use of audit technology by lowering the risk.

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REFERENCES


