THE IMPACT OF AUDIT QUALITY ON FIRM PERFORMANCE: THE MODERATING ROLE OF OWNERSHIP CONCENTRATION

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ARTICLE INFO
Purpose: The main objectives of this research were to study the direct relationship between audit quality (AQ) and the performance of non-financial Jordanian companies and to look into how ownership concentration affects this relationship.

Theoretical framework: This research focuses on AQ, FP, and ownership concentration. Ownership concentration moderates the relationship between AQ and FP, according to the framework. Audit fees are used to evaluate AQ and lend credibility to financial reports, protecting shareholders’ interests.

Design/methodology/approach: The study was conducted on public companies listed on the Stock Exchange of Amman (ASE) in the services and industry sectors, with a total of 92 firms, from 2014 to 2018. The data analysis method used was partial least squares structural equation modelling (PLS-SEM).

Findings: The study's findings suggest that AQ is positively linked to FP, and ownership concentration has a positive and significant effect on FP. Additionally, the moderating influence of ownership concentration confirms that AQ has a statistically significant impact on FP.

Research, Practical & Social implications: The result of this article helps firm managers, regulatory agencies, and market participants on the ASE, as well as nations with highly concentrated ownership and policymakers, understand governance.

Originality/value: This study is one of the first papers in the Jordanian context to address the role of moderating the effect of ownership concentration between AC and FP.

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ABSTRACT

O IMPACTO DA QUALIDADE DA AUDITORIA NO DESEMPENHO DA EMPRESA: O PAPEL MODERADOR DA CONCENTRAÇÃO DE PROPRIEDADE

RESUMO
Objective: Os principais objetivos desta pesquisa foram estudar a relação direta entre a qualidade da auditoria (AQ) e o desempenho das empresas não financeiras da Jordânia e verificar como a concentração de propriedade afeta essa relação.

Referencial teórico: Esta pesquisa enfoca AQ, FP e concentração de propriedade. A concentração de propriedade modera a relação entre AQ e FP, de acordo com o framework. Os honorários de auditoria são usados para avaliar a AQ e dar credibilidade aos relatórios financeiros, protegendo os interesses dos acionistas.

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Desenho/metodologia/abordagem: O estudo foi realizado em empresas públicas listadas na Bolsa de Valores de Amã (ASE) nos setores de serviços e indústria, com um total de 92 empresas, de 2014 a 2018. O método de análise de dados utilizado foi parcial modelagem de equações estruturais de quadrados (PLS-SEM).

Resultados: Os resultados do estudo sugerem que AQ está positivamente ligada ao FP, e a concentração de propriedade tem um efeito positivo e significativo no FP. Além disso, a influência moderadora da concentração de propriedade confirma que AQ tem um impacto estatisticamente significativo em FP.

Implicações de pesquisa, práticas e sociais: o resultado deste artigo ajuda gerentes de empresas, agências reguladoras e participantes do mercado na ASE, bem como nações com propriedade e formuladores de políticas altamente concentrados, a entender a governança.

Originalidade/valor: Este estudo é um dos primeiros documentos no contexto jordaniano a abordar o papel de moderar o efeito da concentração de propriedade entre AC e FP.

Palavras-chave: Qualidade da Auditoria, Desempenho Firme, Concentração Acionária, PLS-SEM.

INTRODUCTION

Over the past few years, global corporate events have witnessed several company scandals involving once-reputable business groups in developed countries, including WorldCom, Enron, and Arthur Andersen Akinyomi & Joshua (2022). The Jordanian corporate environment has not been spared in terms of financial collapses and bankruptcy of companies. Corporate scandals have been extensively reported, such as those that, in turn, create the need for enhanced AQ, such as those at United Group Holdings, Al-Barakat Group Co., and the Jordanian Forum for Economic Development, Mansour et al., (2022), and result in financial losses for shareholders. These scandals have raised questions about the quality of external audit reports, which are expected to ensure that companies' internal controls are robust and efficient...
Hyarat, H. I., Husin, N. M., Jos, R. A. G. (2023)
The Impact of Audit Quality on Firm Performance: the Moderating Role of Ownership Concentration

Iliemena & Okolocha (2019). The agency theory has been useful in explaining the reasons behind audit quality problems, and auditing has been found to improve the credibility and overall quality of accounting information Jensen & Meckling, (1976), Fama & Jensen, (1983).

However, many researchers have examined the amount of audit fees on FP after the primary work on the topic by Simunic (1980). However, despite the relatively extensive research on the direct link between audit fees and FP, empirical evidence is conflicting. For instance, some researchers have found a positive correlation, as in Awinbugri & Prince (2019) for Ghana, Iliemena & Okolocha (2019) for Nigeria, Babatunde et al. (2021) for Jordan, and Phan et al. (2020) for Vietnam. By contrast, fees paid to auditors have a negative link with FP. for instance, Monametsi & Agasha (2020) for Botswana and Uganda, Ugwu et al. (2020) for Nigeria, and Okerekeoti (2022) for Nigeria. This highlights the need for an additional inquiry into the causes of the different results.

According to Baron and Kenny (Baron & Kenny, 1986), when a relationship between a dependent and independent variable is not widely inconsistent in the literature, the indirect effects of a moderator variable may explain this discrepancy. Moreover, Puni & Anlesiny (2020) and Mubeen & Hussain (2020) conclude that the relationship between several corporate governance mechanisms and FP could not necessarily be direct, which indirectly influences it. Consequently, there may be moderators and mediators in their relationship, which future studies should aim to ascertain. Likewise, Bhatia & Gulati (2021) recommended extending the moderator analysis to investigate the relationship between corporate governance and FP. In other words, it assumes that there is a third variable (moderator variable) that may influence such relationships, such as the effect of concentrated ownership as suggested by Waheed & Malik (2021), Amrah et al., (2015), Al-Matari et al., (2017), and Peng et al., (2021).

This research aims to extend the academic literature by examining whether the percentage of ownership concentration moderates the link between audit quality and financial performance in Jordan. The results of this study will be useful for policymakers, regulators, and stakeholders in the Jordanian corporate environment, providing them with insights on the importance of ownership concentration in the relationship between audit quality and financial performance. Furthermore, this research contributes to the existing literature by exploring the moderating effect of ownership concentration on the relationship between audit quality and financial performance. By doing so, it extends previous studies on the direct link between audit fees and financial performance, which have produced inconsistent results. Moreover, it
contributes to the literature on agency theory by providing additional evidence on the factors that influence audit quality and financial performance.

Thus, the objective of this research is to examine whether ownership concentration moderates the link between audit quality and financial performance in Jordan. The research problem is that despite extensive research on the direct link between audit fees and financial performance, empirical evidence is conflicting, highlighting the need for further investigation into the possible causes of these different results. This study aims to address this research problem by exploring the moderating effect of ownership concentration on the relationship between audit quality and financial performance in Jordan. After then, the remaining aspects of this study are organized in the following fashion: Part 2 is the literature review and hypothesis development. Part 3 discusses the research materials, methods, and data. Part 4 presents the results and discusses them. Finally, Part 5 concludes with the conclusion, limitations, and recommendations for further research.

LITERATURE REVIEW

Audit Fees

The process of auditing plays a crucial part in financial reporting because it strengthens reliability and credibility by identifying instances of fraud, errors, as well as irregularities in financial statements. Furthermore, this is necessary for enhancing FP because users rely on these statements to determine where their money should be invested (Monametsi & Agasha, 2020). Wherefore, the fees charged by professional accounting companies have piqued the interest of researchers, practitioners, and academics (Alajo & Nzewi, 2020). As a result, there has recently been a trend in accounting around the issue of audit fees, specifically regarding whether these high fees affect the FP negatively or positively. In addition, many studies interpret an audit's price as an indicator of the AQ being performed (Rashid et al., 2021; Alrashidi et al., 2021).

Although the amounts of audit fees have been discussed in the literature before, Simunic (1980) is credited as being the first author to construct a model of the process of determining audit fees, focused on the contract between the auditor and the organization to assess audit fees according to the amount of time spent on the auditing procedure and the amount of service needed (Simunic, 1980). Furthermore, audit fees are defined as the amount given to professional auditors for the certification of financial statements in accordance with International Standards on Auditing (ISA) No. 15 (2011). As for the Jordan Securities
Commission (JSC) Law No. 18 of 2017, in determining the auditor's fees, Article (30) of the Jordanian Companies Law authorizes the board of directors to appoint a legal auditor and determine their fees.

Therefore, creating audit fee models can help to establish criteria for evaluating audit fees. This, in turn, will help clients review their current fees and make better decisions about which auditors to hire to improve FP Shakhatreh and Alsmadi (2021). Moreover, the value of audit fees and the way they are set are important issues for both international as well as national accounting bodies because they show how audit fees must be set, what fees they must cover, and what factors should be taken into account when selecting the audit fee (Hassan, 2015). Because the fees paid to external auditors are of significant relevance to a wide variety of stakeholders, disclosure guidelines necessitate that certain information be reported in the financial statements of firms (Lawal & Ibrahim, 2022).

The agency problem (Fama & Jensen, 1983; Jensen & Meckling, 1976) can be used to explain audit fees. This theory shows how important external auditing is as a control mechanism to reduce agency conflicts; higher audit fees are likely to lead to more auditing by the statutory auditor. In addition, fees paid to auditors for audit services give auditors a strong feeling of commitment and desire to make sure the company gets the best value for its money by receiving the finest audit service possible Ado et al. (2020). Furthermore, there appears to be more evidence to support the idea that audit fees are positively correlated with FP, e.g., Awinbugri & Prince (2019) for Ghana; Iliemen & Okolocha (2019); Nkuru et al. (2022) for Nigeria; Babatunde et al. (2021); Mahmod & ALkabbji, (2020) for Jordan; Ado et al. (2020) for Nigeria; and Phan et al. (2020) for Vietnam. This means that the firm does better when the audit fees are higher. However, when the client pays extraordinary audit costs owing to an economic auditor-client bonding, there is a possibility that the external auditors’ ability to oversee the company may be undermined. (e.g., Monametsi & Agasha 2020) for Botswana and Uganda.; Ugwu et al. (2020) for Nigeria; Sayyar et al. (2015) for Malaysia; and Okerekeoti (2022) for Nigeria. Based on the investigations that have been done, the following theories have been proposed:

H1: Audit fees significantly affect firm performance.

Ownership Concentration

The percentage of ownership owned by larger shareholders of a company, who so effectively influence its operations and policies whether directly or indirectly, is known as the
concentration of ownership, and it is one of the key determinants of the FP (Habtoor, 2020; and Javeed et al., 2021).

Berle and Means (1932) suggested that ownership is so widely spread that the ordinary shareholder is unable to oversee management properly. Jensen and Meckling (1976) contend that corporate managers enrich themselves at the expense of shareholders by shirking and collecting perquisites. As a result, a high concentration of ownership enhances monitoring, reduces conflicts of interest between shareholders and executives, and boosts FP (Nashier & Gupta, 2020). Major shareholders, according to agency theorists, have a strong financial motive to keep an eye on their investments and use their voting ability to affect strategic decisions, preventing management opportunism and lowering information asymmetry, Jensen & Meckling (1976); Shleifer & Vishny (1986) and Sewpersadh (2022). Moreover, high ownership concentration is a governance approach that hinders company management from deviating from shareholder interests (Puni & Anlesinya, 2020) because big shareholders watch management more than small shareholders (Al Farooque et al., 2019).

However, as Shleifer and Vishny (1997) note, another kind of agency problem comes from conflicts of interest between minority as well as large shareholders, where major owners can benefit themselves at the cost of smaller owners by giving themselves special dividends, utilizing transfer pricing to linked firms, using insider information to their advantage, exploiting business relationships with the firms they control, and so forth (Fama & Jensen, 1983; Shleifer & Vishny, 1997 and Habtoor, 2020). There appears to be more evidence to support the idea that ownership concentration is negatively correlated with FP (e.g., Wang & Shailer, (2015) for 18 emerging markets; Paniagua et al. (2018) from 59 countries; Dakhllallh et al. (2019) for Jordan; Kabir et al. (2020) for east Asia; Pandey & Sahu (2021) for India; Martínez-García et al. (2021) for the Gulf Cooperation Council; and Habtoor, (2020) for Saudi Arabia. On the other hand, the opposing research thinking contends that big shareholders might be improved FP (e.g., Pun & Anlesinya, 2020) for Ghana; Kao et al. (2019) for Taiwan; Nashier and Gupta, (2020) For India; Iwasaki and Mizobata (2020) for the former Soviet Union; Eastern Europe and Central; Alkurdi et al. (2021) for Jordan; Javeed et al. (2021) For Pakistan; Peng et al. (2021) for China and Sewpersadh, (2022) for South Africa. According to this kind of studies believes that firms that focus on large shareholders may improve company image, attract additional resources, and enhance FP. At the same time, other researchers have not seen a correlation and U-shaped between ownership concentration and FP (e.g., U-shaped: Altaf and Shah (2018) for India;
Laporšek et al. (2020) for Slovenia; Martínez-García et al. (2020) for Gulf Cooperation Council; and Lai et al. (2022) for China.

There is no consensus among studies regarding the connection between ownership concentration and FP, some quantitative research has explored the ownership concentration and FP among companies using panel data, producing contradicting results. Lastly, on the basis of the investigations described, the following hypotheses are presented in accordance with agency theory and the preceding considerations:

H2: Ownership concentration has a significant effect on firm performance.

The Moderating Effect of Ownership Concentration

Agency conflict varies depending on the size of ownership and the type of company shareholders, which directly affects how the board makes decisions; in the event of dispersion of the firm ownership (type I), the agency conflict between owners (outsiders) and management (insiders) because the clear separation between management as well as ownership, which typically arise in companies with distributed shareholding Jensen and Meckling (1976). Nevertheless, an indirect influence (type II) is prevalent in companies with highly concentrated ownership which exist between minority ownership (non-controlling shareholders) and majority ownership (controlling shareholders) (Shleifer & Vishny, 1997; Morck et al., 1988).

Generally, emerging markets suffer from this issue because concentrated investors attempt to influence corporate governance mechanisms to promote their interests at the expense of minority shareholders (Sewpersadh, 2022). According to Iglesias et al., 2021; Kabir et al., 2020; Martínez-García et al., 2021; Lai et al., 2022; Shumali & Abuamsha, 2023, Minority shareholder expropriation in Agency Issue Type II in developing markets has been looked into a lot in the research literature. Jordan represents an institutional framework typified by high levels of ownership concentration across most ASE-listed businesses, controlled by controlling shareholders. It has been noted that Jordan, as considered a developing economy, has inadequate legislative enforcement and investor protection (Alhababsah, 2019; Saidat et al., 2019; Shatnawi et al., 2021). The evidence demonstrates that controlling stockholders dominate Jordanian company boards of directors. These shareholders strongly affect board directors and tend to pick external auditors with less independence. Despite the existence of auditors who hold qualifications but are not qualified. For access to insider information at the cost of the rights of minority owners.
Furthermore, Nkiru et al. (2022) suggested that shareholders choose external auditors with a focus on their level of education since such a partnership might increase the credibility of the audit process, therefore, improving FP. However, minority shareholders have essentially little decision-making authority, Hu et al. (2020), which promotes major stakeholders to increase their riches at the expense of the rights of smaller owners. As a result, a high AQ is probably necessary to reduce this conflict and protect the other shareholders' interests. Corporate financial statement fraud performed by firm management is a common and recurring occurrence; the engagement of external auditors exacerbates this condition to support the fraud, Bernawati and Widani (2020). For decades, academics have questioned whether audit fees affect the FP they audit. The efforts made by the company's management for an effective AQ to achieve corporate performance require the support of the shareholders. Since the stockholders have substantial influence over the management appointment, the auditors have the incentive to satisfy stockholders by inappropriately accepting management's preferred accounting Hu et al., (2022), which may make the auditor financially dependent on the shareholders, putting their judgments (Shakhatreh & Alsmadi, 2021).

This generates a gap in the compulsion of the majority shareholders' interests in firm management. For this reason, the alliance between them may degrade the quality of financial statements. Furthermore, outside investors may not have much faith in the company's stated profitability because they are aware of the controlling shareholder's desire to withhold accounting facts that would draw their attention Nawaiseh, (2019). The results, on the other hand, show that fees given to auditors for audit services offer auditors a tremendous feeling of commitment and the drive to ensure that the business obtains the best audit service possible Alrashidi et al. (2021); Ado et al. (2020). Thus, based on the above discussion, the following hypotheses are proposed:

H3: Ownership concentration moderates the relationship between audit fees and firm performance.

MATERIALS AND METHODS

Study Sample and Data Source

There are three sectors in the public firm listed on the Amman Stock Exchange (ASE): finance, services, and industry. However, this study excluded financial companies (e.g., insurance firms and banks) because they have a regulatory structure and different corporate governance guidelines published by the Jordanian Central Bank and Insurance Authority,
further ensuring the robustness of the analysis (Alhababsah, 2019). Furthermore, it is difficult for independent certified public accountants (CPAs) to properly audit Islamic banking if they are unfamiliar with Islamic Sharia, according to Nawaiseh et al. (2019). Thus, only the service and industry sectors are chosen because they have the ability to attract and employ qualified and knowledgeable individuals to serve on the board of directors (Kanakriyah, 2021).

Data Collection

Financial information was obtained from the available data released from the Thomson Reuters database for FP. As regards non-financial information for audit fees and ownership concentration, it was taken manually from the ASE website’s annual reports. It was confirmed that all the variables required are available to realize the research objectives connected to AQ. The firms included in the study (services and industrial) have the available accounting information required to achieve the study goals based on the study variables. During the research period, the shares of these firms were listed for circulation. Furthermore, there were no bankruptcies, mergers, or acquisitions among the firms. Thus, the number of firms that participated in the research sample until the end of 2018 and met the study criteria reached 92 companies with 460 observations.

Study Variables

Firm Performance (FP)

According to Greenley (1995), performance refers to an organization’s capacity to achieve its goals via the effective use of its financial and human resources, as well as its ability to survive and maintain a balance between the needs of its shareholders and its employees. FP is the outcome of the interplay of two key components: the manner of utilising resources (efficiency) and the results gained from that usage (effectiveness). We employed two separate FP measure to investigate to possible differences as variables to quantify FP indicators. Firstly, we employed Tobin's Q ratio (Tobin, 1969), a measurement frequently utilized in the management as well as finance research disciplines to find out the effect of sustainable business strategies. Tobin's Q is the market value on total assets determines. Tobin's Q can expect a firm’s current and prospective performance by showing a continuous measure of the importance of a corporation (Nkiru et al., 2022; Bhargave and Tandon, 2023) Secondly, ROA is considered accounting-based performance because it measures the profit from the company’s asset. To calculate ROA, used a calculation that net income on assets invested in the company during the
reporting period. To put it another way, ROA shows how efficiently a firm’s management makes earnings from its economic resources or assets shown on its balance sheet (Bansal et al. 2023). In empirical studies, these variables are often used. Some studies, for example, used ROA and TQ. Previous studies (e.g., Sayyar et al. (2015); Babatunde et al. (2021); (Monametsi & Agasha, 2020); Alkurdi et al., (2021); Javeed et al. (2021). Table 1 below summarizes the measurement of the study variable.

Measurement of Variables

The variables used in the analysis can be broadly classified into three categories: independent variable, dependent variables, and moderating (Refer Table 1)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Labels</th>
<th>Measurement</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent Variable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Performance</td>
<td>(ROA)</td>
<td>Net income divided by total assets</td>
<td>Ado et al. (2020); Alrashidi et al. (2021); Babatunde et al. (2021); Okerekeoti, (2022).</td>
</tr>
<tr>
<td>(Tobin’s Q)</td>
<td></td>
<td>Market value/Total assets</td>
<td>Babatunde et al. (2021); Nkiru et al. (2022); Monametsi and Agasha (2020); Javeed et al. (2021).</td>
</tr>
<tr>
<td>Independent Variable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audit fees</td>
<td>AF</td>
<td>The value of the audit fees paid to auditors by natural logarithms</td>
<td>Ado et al. (2020); Alrashidi et al. (2021); Babatunde et al. (2021); Okerekeoti (2022); Akinyomi and Joshua (2022).</td>
</tr>
<tr>
<td>Moderating Variable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ownership Concentration</td>
<td>oc</td>
<td>a minimum of 5% of the total number of common shares held by stockholders.</td>
<td>Nehme et al. (2020); Shakhatreh and Alsmadi (2021); Javeed et al. (2021); Sewpersadh, (2022).</td>
</tr>
</tbody>
</table>

Data Analysis

In the current study, to analyze data, Smart PLS 4 and SPSS were used to determine the study model. SPSS is used to run descriptive statistics on the sample in addition to frequency analysis. It is applied to variables to ensure sample validity and to determine whether any variables have missing values. In terms of SEM using partial least squares (PLS-SEM), there are several advantages to using PLS-SEM as compared to covariance-based SEM (CB-SEM) such as no need for normality assumption and Multicollinearity. PLS-SEM is also an excellent analysis tool for both simple and complex models. In the current paper, our model is complicated because it includes the moderating variable (ownership concentration).
RESULTS AND DISCUSSION

Descriptive Statistics

Descriptive statistics are used to give abbreviated information well about the sample target in order to create a basic and clear picture of the data (Genser et al., 2007). Standard deviation, minimum, maximum, and mean values are used to represent the descriptive statistics for the variables in the data collection. Table 2 presents the ownership concentration, audit fees, Tobin’s Q, and ROA for 92 selected non-financial firms. Based on the result, audit fees have a minimum of 800 to a maximum of 122142. The mean for audit fees is 15401.78. Next for ROA, the mean is 0.02%, the result also shows maximum for return on asset is 2.48%, the higher the return on assets (ROA), the better the performance of the company, while the mean are 1.11% for Tobins Q. Lastly, ownership concentration has a minimum value of 0.06 and maximum value of 0.99.

Table 2: Descriptive Findings

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observations</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean, %</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit Fees</td>
<td>460</td>
<td>800</td>
<td>122142</td>
<td>15401.78</td>
<td>17111.25</td>
</tr>
<tr>
<td>ROA</td>
<td>460</td>
<td>-6</td>
<td>2.48</td>
<td>0.02</td>
<td>32.22</td>
</tr>
<tr>
<td>Tobins Q</td>
<td>460</td>
<td>0.09</td>
<td>6.21</td>
<td>1.11</td>
<td>0.33</td>
</tr>
<tr>
<td>Ownership Concentration</td>
<td>460</td>
<td>0.06</td>
<td>0.99</td>
<td>0.63</td>
<td>0.24</td>
</tr>
</tbody>
</table>

Assessment of Measurement Model

Following the recommendations of Anderson and Gerbing (1988), the constructed model was evaluated in two steps. Initially, the measurement model was investigated to test the reliability and validity of the instruments utilized in accordance with Hair et al. (2019) and Ramayah et al. (2018). After that, the proposed hypothesis was put to the test by running the structural model. A measurement model displays latent variables’ observed variables and evaluates their measurement qualities. Additionally, the characteristics of the measurement model must be met before going on to SEM. The measurement model is evaluated in two parts: reliability and validity. The measurement model's validity is determined by demonstrating construct validity, convergent validity, and discriminant validity. Hereafter the reliability of the variable of this study is assessed via both internal consistency and indicator reliability (Kuchinka, 2004).

The results for the composite reliability (CR) components and the convergent validity assessment are shown in Table 3. The loading values must be ≥0.50, the Average Variance Extracted (AVE) should be ≥ 0.50, as well as the (CR), must be ≥ 0.70 (Hair et al., 2020).
Table 3 indicates that all of the indicator loadings are higher than 0.50, indicating convergent validity at the indicator level; whereas the average variance extracted (AVE) values for all variables are higher than 0.50, this also indicates construct-level convergent validity; Additionally, all the composite reliability values are higher than 0.70; as a result, all of these values satisfy the quality standards for convergent validity of data as according to (Hair et al., 2020).

The reason for this is that the single-item measure was used in this study to examine the validity as well as reliability of the measurement model, which is established by the study's nature and goal. This is backed by Diamantopoulos et al. (2012) and Fuchs and Diamantopoulos (2009), who recommend that a single-item measure must be considered when the constructed variable has an alpha value that is more than 0.9 which means that resulted from higher homogeneous in internal consistency. Moreover, Nunnally (1994) found that the internal consistency of the measurement model is regarded to be valid when the alpha values are in range 0.9 to 1.0. As a result, all indicators in this investigation were found to be reliable.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Indicators</th>
<th>Loadings</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit Fees</td>
<td>Audit Fees</td>
<td>0.786</td>
<td>0.818</td>
<td>0.529</td>
</tr>
<tr>
<td>Firm Performance</td>
<td>Firm Performance</td>
<td>0.597</td>
<td>0.716</td>
<td>0.567</td>
</tr>
<tr>
<td>Ownership Concentration</td>
<td>Concentration</td>
<td>0.579</td>
<td>0.720</td>
<td>0.623</td>
</tr>
</tbody>
</table>

The term discriminant validity refers to the degree to which a construct is distinct from other constructs (Hair et al., 2010). The heterotrait-monotrait correlation ratio is used to test discriminant validity in this study (HTMT), and its foundation is the multitrait-multimethod matrix suggested by Henseler et al. (2015). Henseler et al. (2015) recommend starting points of 0.85 and 0.90. In addition, the value one must not be included within the confidence interval of the HTMT. Table 4 shows that all values meet the HTMT 0.90 (Gold et al., 2001) and HTMT 0.85 (Kline, 2011) criteria, suggesting no discriminant validity issue in this research. Therefore, based on the prior tests and findings of the HTMT test, it is concluded that discriminant validity is established in this research.
Table 4: Discriminant Validity Output

<table>
<thead>
<tr>
<th></th>
<th>Audit Fees</th>
<th>Firm Performance</th>
<th>Ownership Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit Fees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Performance</td>
<td>0.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ownership Concentration</td>
<td>0.04</td>
<td>0.28</td>
<td></td>
</tr>
</tbody>
</table>

**Assessment of Structural Model**

While doing an evaluation of a structural model using PLS, the importance of the path coefficient and the coefficient of determination are two of the most important factors to consider.

**Significance of Path Coefficient**

SEM was used to detect and assess the intensity role of the moderating impact of concentration on the relationship between the AQ and FP. Because PLS operates on the assumption that the data do not follow a normal distribution, it employs a nonparametric bootstrap approach to evaluate and validate the significance of estimated path coefficients.

Following the recommendations of Hair et al. (2019), the path coefficients, standard errors, t-values, and p-values for the structural model were reported using a 5,000-sample re-sample bootstrapping approach (Hair & Alamer, 2022). Figure 1 depicts the PLS structural model for t-value using PLS bootstrapping. Table 5 summarises the findings of the analysis undertaken to evaluate the hypothesis.

Based on Table 5, the findings of testing Hypothesis H1 indicate that there is a positive effect between audit fees and ROA with a t-value of 1.72* and a t-value of 2.50** with Tobin's Q. In addition, H2 showed a positive relationship between ownership concentration with ROA (1.68*) and Tobin's Q (2.40**). As for the moderating effect, Table 5 shows a positive relationship between the hypotheses proposed (H3) with owner concentration as a moderator, with a t-value of 1.90* with ROA and 1.98* with Tobin's Q.
Hyarat, H. I., Husin, N. M., Jos, R. A. G. (2023)
The Impact of Audit Quality on Firm Performance: the Moderating Role of Ownership Concentration

Coefficient of Determination, $R^2$

According to Cohen et al. (2013), $R^2$ considers substantial in case $R^2$ is higher than 0.26, moderate (0.13 to 0.26), and considered weak (0.02 to 0.13).

In the present study, the $R^2$ value are consider moderate (0.22 - without moderator) and increased by 0.03 with ownership concentration as moderator (0.25), as demonstrated in Table 5 below. This means that the ownership concentration increases the $R^2$ values by only 0.03.

Table 5: Summary of hypotheses testing with and without moderator

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Main effect</th>
<th>Interaction effect</th>
<th>t-values</th>
<th>P-Value</th>
<th>Decision</th>
<th>R2</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Audit Fees -&gt; ROA</td>
<td>0.13</td>
<td>0.08</td>
<td>1.72*</td>
<td>0.00</td>
<td>Accepted</td>
</tr>
<tr>
<td>H1</td>
<td>Audit Fees -&gt; Tobin’s Q</td>
<td>0.13</td>
<td>0.05</td>
<td>2.50**</td>
<td>0.03</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>Ownership concentration -&gt; ROA</td>
<td>0.04</td>
<td>0.03</td>
<td>1.68*</td>
<td>0.09</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>Ownership concentration -&gt; Tobin’s Q</td>
<td>0.18</td>
<td>0.07</td>
<td>2.40**</td>
<td>0.02</td>
<td>Accepted</td>
</tr>
<tr>
<td>After adding moderator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3</td>
<td>Ownership concentration x Audit Fees -&gt; ROA</td>
<td>0.09</td>
<td></td>
<td>1.90*</td>
<td>0.00</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3</td>
<td>Ownership concentration x Audit Fees -&gt; Tobin’s Q</td>
<td>0.10</td>
<td></td>
<td>1.98*</td>
<td>0.01</td>
<td>Accepted</td>
</tr>
<tr>
<td>R2 changes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.03</td>
</tr>
</tbody>
</table>

Note: *1.645 < 0.05, **2.33 <0.01
DISCUSSION

This section will discuss the findings of this research based on the results reported above. Investors need the reliability of the information they get; therefore, they rely on audited information. AQ is essential for investors to have confidence in a company's information with regard to its FP.

As mentioned earlier, this paper aimed to accomplish two primary objectives. The first of these objectives was to investigate the direct relationship that exists between AQ, specifically audit fees, and FP. The next goal is to investigate the moderating influence of ownership concentration on the relationship between AQ and FP. In addition to the possible direct relationship between concentration of ownership and FP. Three hypotheses were proposed (H1-H3) based on the findings discussed above.

Hypotheses H1 Regarding the AQ proxy, the results show a positive effect between audit fees and ROA with a t-value of 1.72*, followed by the result of the relationship between audit fees and Tobin's Q, which is significant with a t-value of 2.50**. These findings confirmed that high fees motivate auditors to provide better audit services, in addition to a sense of responsibility and commitment to ensure that the company gets better performance for their money when they are motivated by higher fees. This aligns with previous studies by Awinbugri and Prince (2019), Iliemena and Okolocha (2019), Babatunde et al. (2021), Mahmod and Alkabbji (2020), Ado et al. (2020), Phan et al. (2020), and Nkiru et al. (2022).

Next for H2, the result for the relationship between ownership concentration and FP shows a significant result with ROA (1.68*) and Tobin’s Q (2.40**). The findings are consistent with the positive results by Puni & Anlesinya, (2020), Kao et al. (2019), Nashier and Gupta, (2020), Ozdemir & Kilincarslan, (2021), Iwasaki and Mizobata (2020), Alkurdi et al., (2021), Javeed, et al., (2021), Peng et al. (2021), Sewpersadh, (2022), and Shumali & Abuamsha, (2023). This type of researcher believes that firms that concentrate on large shareholders may enhance their corporate image, which will increase their profits, additionally, concentrated ownership will increase their sense that the business represents their own investment, and as a result, they will be driven to collaborate to improve the FP. by monitoring and influencing economic policies to ensure continued long- term success. In addition, due to their monitoring abilities, major shareholders are more vigilant than minority shareholders. According to agency theory, concentrated ownership encourages major shareholders to monitor management, lowering agency costs and improving FP. (Anlesinya, 2020; Nashier and Gupta, 2020; Sewpersadh, 2022).
Lastly, for Hypothesis 3, which examines the moderating effect of ownership concentration in the relationship between AQ and FP, the model reported positive and significant effects with ROA (t-values 1.90*) and (t-values 1.98*) with Tobin’s Q. These results confirmed the impact of ownership concentration on the association between AQ and FP. These results are consistent with agency theory. In general, the results of this research provide useful insights into the role of ownership concentration in forming an association between governance mechanisms and FP in Jordanian.

CONCLUSION

As was mentioned earlier, this study had two main goals. The first goal was to examine the direct relationship between AQ and FP. Throughout a five-year period among non-financial firms (2014-2018). The second goal is to investigate the moderating influence of ownership concentration on the relationship between AQ and FP. Furthermore, this research used different techniques, including PLS-SEM. By focusing on agency theory, the analysis findings revealed a positive and significant relationship between AQ and FP. Besides that, the results of this research also revealed a positive relationship between ownership concentration and FP. Additionally, this research confirmed that the role of ownership concentration has a positive and significant effect on the relationship between AQ and FP.

The present study, much like other empirical studies, has a number of limitations; finding solutions to these problems might serve as a guide for further investigation. To begin, the study excluded the financial companies sector listed because they have a regulatory structure and different corporate governance rules issued by the Central Bank of Jordan as well as the Insurance Authority. Thus, the inclusion of the financial sector in future research would increase the comprehension of AQ in the Jordanian setting. Second, since this research only included service and industry sector Jordanian firms, the findings are limited in generalizability and could not be similar in other companies’ environments. Third, the study was entirely based on secondary data. Alternative study approaches, like interviews or self-administrated surveys, could give richer insights and a more accurate picture concerning the role of various types of ownership in ensuring improved AQ.

The study also examined the role of ownership concentration as a moderating. Therefore, this study advises future researchers to take into account other variables such as institutional ownership, foreign ownership, managerial ownership, and others as the moderating variables. Despite these minor limitations, this study makes a contribution by elucidating the
relationship between AQ and FP and the role of moderating effect on AQ and FP. Thus, enabling us to generalize the findings.

REFERENCES


