

Joint audit and tax fraud: Case of listed American companies

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Abstract

Research Question: How does the presence of joint auditors impact tax evasion practices in publicly traded U.S. companies, and what role does audit committee expertise play in mitigating tax evasion?

Motivation: The motivation for this study stems from the desire to understand the potential role of joint auditing and the expertise of audit committees in reducing tax evasion among U.S. publicly traded companies. The research is grounded in agency theory and stewardship theory to explore how governance mechanisms influence corporate tax behaviour.

Idea: The central idea of the study is that joint auditing, as well as stronger audit committees with greater expertise, may reduce the likelihood of tax evasion. By examining these factors, the study aims to determine if joint audits serve as a deterrent to tax evasion and if audit committee expertise has a significant effect on corporate tax practices.

Data: The study uses a dataset comprising 225 observations from 27 publicly traded U.S. companies. This dataset provides the necessary data to explore the relationship between joint auditing, audit committee expertise, and tax evasion.

Tools: Binary logistic regression is used to analyse the dataset, enabling the study to assess the relationship between joint auditing and the likelihood of tax evasion. This statistical method helps determine the significance of these relationships within the dataset.

Findings: The results of the study indicate that U.S. companies listed on stock exchanges with joint auditors are significantly less likely to engage in tax evasion, suggesting that joint auditing may act as a deterrent. Furthermore, a significant negative correlation is found between the expertise of the audit committee and the incidence of tax evasion, indicating that stronger audit committees are associated with lower rates of tax evasion.

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Contribution: This study contributes to the literature by providing evidence of the effectiveness of joint audits and proficient audit committees in mitigating tax evasion. The findings offer valuable insights for regulatory bodies and corporate governance practices, suggesting that both joint auditing and enhanced audit committee expertise may help reduce tax evasion in publicly traded companies.

Keywords: Co-auditors, tax evasion, audit committee expertise, listed American companies.

JEL codes: M5, M21

1. Introduction

Tax evasion remains a growing concern, with numerous financial scandals continuing to emerge in recent years. Notable cases include the Wirecard affair (2020), the Danske Bank case (2020), the Paradise Papers revelations (2021), the “Cum-Ex” tax fraud scheme (2022–2023), and the beneficial ownership scandal in Italy (2024). These events reflect a troubling trend: tax evasion practices are becoming increasingly common and, in many cases, operate at the thin boundary between illegality and aggressive tax planning.

This global phenomenon is fuelled by several factors. Specialized consulting firms often design complex schemes involving fictitious entities, while financial intermediaries facilitate these arrangements. Moreover, some countries adopt lenient regulatory frameworks and favourable tax regimes to attract foreign capital, further encouraging such practices. The ongoing emergence of new tax havens illustrates how rapidly these strategies evolve.

In this context, the role of corporate governance in curbing tax fraud is critical. The board of directors bears the responsibility for overseeing compliance and implementing effective internal controls, as highlighted by Porter (1997). A robust anti-corruption framework requires multiple components, including transparent financial reporting, strong internal controls, and external audits, as outlined by the AICPA (2005). Auditors play a key role in ensuring the reliability of financial statements and in detecting irregularities (Kimbrow, 2002).

Joint audits, where multiple auditors examine a company’s financials, can further strengthen oversight. According to Everaert *et al.* (2007), such audits promote collaboration and help identify weaknesses in tax supervision. They are particularly useful in targeting high-risk taxpayers and refining audit processes.

This study focuses on the U.S. context, chosen for its strong regulatory environment and the availability of detailed, publicly accessible financial data. The U.S. has witnessed major tax fraud cases, such as Enron and Lehman Brothers, offering a rich context to examine the dynamics of tax evasion. Additionally, the frequent use of joint audits in sectors like banking and insurance provides a valuable opportunity to evaluate their effectiveness in reducing tax fraud risks. To clarify, this research specifically focuses on corporate tax evasion, meaning the illicit practices carried out by firms, and does not address tax evasion committed by individuals.

This study is motivated by the need to understand the effectiveness of joint audits in combating tax evasion, a persistent issue with significant financial and ethical implications. By focusing on the impact of having multiple auditors on reducing tax fraud, our research aims to provide empirical evidence on whether this approach offers a more robust mechanism for detecting and deterring tax evasion compared to traditional single-auditor models. The practical contribution of this study lies in its potential to inform policymakers and regulators about the effectiveness of joint audits in improving tax compliance. The findings could guide legislative reforms and enhance regulatory frameworks to better address tax evasion. Additionally, by expanding the existing literature on the subject, this study will offer valuable insights for corporate governance practices, particularly regarding how companies can optimize their auditing processes to mitigate risks associated with tax fraud. The structure of the study is as follows: a comprehensive literature review, a description of the adopted methodology, and a presentation and analysis of the results.

2. Literature review and development of hypotheses

2.1 Confusion between tax avoidance and tax evasion

Tax evasion can be defined as the illegal exploitation of one's employment or company resources for personal gain through deliberate misappropriation or fraudulent activities (Friese *et al.*, 2008). Fraud more broadly encompasses any illegal act intended to deceive for financial gain. In the context of taxation, it often involves actions by business managers aimed at reducing the tax base through unlawful means (Hasseldine & Morris, 2013). Challoumis (2024) discusses the difference between tax avoidance and evasion, as well as the measures that the EU and Greece have taken to combat the former.

In contrast, tax avoidance refers to behaviour intended to lessen the tax burden by exploiting legal loopholes within the tax system. While tax avoidance does not inherently violate the law, it can contravene the spirit of the law. It involves strategies such as abusive transfer pricing or artificially manipulating profits to obtain lower or zero tax rates for fictitious activities.

Sikka (2010) emphasizes that both legal tax avoidance and illegal tax evasion should not be condoned, as both result in significant losses to the state. Bazart (2002) distinguishes tax avoidance from evasion by noting that the former carries less risk for the taxpayer but may incur costs related to information acquisition, such as fees paid to tax advisors.

2.2 Joint audit and tax evasion

The establishment of financial accounts is a crucial mechanism for overseeing managerial activities; however, for this mechanism to be effective, the accounting information produced must be reliable (Pochet, 1998). Legal audits address this need for reliability by enabling an external, independent auditor to critically examine whether a company's activities are accurately reflected in its annual accounts, in accordance with a recognized accounting framework. This research is grounded in theoretical frameworks such as agency theory and stewardship theory. From an economic standpoint, the principal-agent relationship—characterized by a conflict of interest often referred to as the “agency problem” (Jensen & Meckling, 1976; Donaldson & Davis, 1991)—involves a transfer of trust and commitment despite the agent’s potential opportunism. In contrast, stewardship theory posits that managers act as “stewards” of shareholders’ interests, prioritizing these interests above their own (Donaldson & Davis, 1991).

Similarly, the auditor’s role extends beyond merely detecting fraud and accounting manipulations; auditors must also ensure the sincerity and faithful representation of a company’s financial statements, while taking measures against fraud and managerial manipulation (Sikka *et al.*, 1998). In light of financial scandals over recent decades, Bazerman *et al.* (1997) have questioned the independence of certain auditors and challenged their judgments. Statutory auditors contribute significantly to audit quality and their ability to detect fraud (Francis, 2004). Peer review, as practiced in joint audits, can enhance auditor independence (National Commission on Fraudulent Financial Reporting, 1987), as two auditors working together mutually monitor one another (Deng *et al.*, 2014). Piot and Janin (2007) suggest that joint audits offer dual benefits: reciprocal control of auditors’ diligence and reinforcement of their independence, which helps limit power imbalances and potential biases, particularly those of the audited entities. The presence of two external auditors facilitates opinion comparison, thereby lending greater weight to the audit opinion (Guedes, 2007).

However, some studies indicate a negative association between joint audits and audit quality (Lesage *et al.*, 2016; Margairaz, 1988), suggesting that one audit firm might shirk responsibility by relying on the other’s efforts (Deng *et al.*, 2014; Ratzinger-Sakel *et al.*, 2013; Oliver & Walker, 1984; Hardin, 1968; Olson, 1968). Structured

co-commissioning cooperation can, nonetheless, enhance the effectiveness of national tax compliance and revenue collection programs by detecting and correcting instances of non-compliance. Joint audits are widely considered an effective tool to deter tax evasion (Alm & McKee, 2006; Devos, 2013). Everaert *et al.* (2007) find a positive impact of joint audits on detecting tax fraud among publicly traded U.S. companies.

In light of these studies regarding the impact of joint audits on tax evasion, the following hypothesis can be formulated:

H₁. *Adopting the joint auditor approach reduces tax evasion.*

2.3 Audit committee and tax evasion

The establishment of audit committees in the United States became mandatory with the enactment of the Sarbanes-Oxley Act on July 30, 2002. These committees play a crucial role in overseeing the quality of financial reporting and internal controls, thereby indirectly influencing the likelihood of fraud. Abbott *et al.* (2000) examined the impact of audit committee characteristics—such as independence and meeting frequency—on the probability of accounting fraud. Their study concluded that an effective audit committee significantly reduces the likelihood of fraudulent activities. This conclusion is reinforced by Huang and Thiruvadi (2010), who found that the presence of a financial expert on the audit committee is strongly associated with a decrease in fraud. Tjondro and Olivia (2018) found that the audit committee's role in moderating the trade-off between tax avoidance and cost of debt is stronger in non-family firms than in family firms.

Farber (2005) compared governance mechanisms between firms prosecuted by the SEC and a matched control group, analyzing data before and after the detection of fraud. His findings revealed significant differences in the proportion of independent directors on the board one year prior to the fraud. Fraudulent firms were characterized by a lower percentage of independent directors, fewer audit committee meetings, and a lack of financial expertise among committee members. These results contrast with those of Beasley *et al.* (2010), who found no significant differences in the percentage of independent directors on boards or audit committees between fraudulent and non-fraudulent firms. Interestingly, their research also indicated that fraudulent firms often had a higher number of finance and accounting experts on their boards, suggesting a more complex and nuanced relationship between board composition and fraud occurrence.

Lin and Hwang (2010) found that audit committees with greater financial expertise and more frequent meetings were more effective in detecting and preventing financial irregularities. Similarly, Krishnan (2015) emphasized that financial

reporting quality improves with more independent audit committees, thereby reducing the incidence of fraud.

Considering the studies related to the impact of audit committee expertise on tax evasion, the second hypothesis can be formulated as follows:

H₂. *Audit committee expertise reduces the likelihood of tax evasion.*

2.4 Auditor turnover and tax evasion

Carcello and Nagy (2004) found that longer auditor tenure is associated with a decreased likelihood of fraud in financial statements. Their study suggests that auditors who serve the same client for an extended period develop a deeper understanding of the client's operations, which can enhance audit effectiveness and reduce the risk of fraudulent reporting. Similarly, Casterella *et al.* (2004) report that companies with auditors in place for three years or more face fewer penalties from the SEC, indicating that long-term auditor relationships may contribute to more reliable financial reporting and regulatory compliance. However, this perspective is not without contention. DeAngelo (1981a) argues that extended auditor tenure can compromise auditor independence, as audit firms may begin to view longstanding clients as steady sources of revenue. This dependency can reduce professional scepticism, increasing the risk of fraudulent financial reporting. More recent studies support this concern.

These contemporary studies build on the foundational research by Carcello and Nagy (2004) and Casterella *et al.* (2004), offering a more nuanced understanding of the dual effects of auditor tenure. While long-term relationships can improve audit familiarity and reduce penalties, they may also undermine auditor independence and skepticism—both essential for effective fraud detection.

Considering the studies related to the impact of auditor turnover on tax evasion, the third hypothesis of this study is formulated as follows:

H₃. *Auditor turnover reduces tax evasion.*

3. Methodology and methods

3.1 Sample selection and data collection process

This section provides a detailed overview of the sample selection, data collection process, and the criteria employed. The primary sample comprises U.S. companies listed on the NYSE and NASDAQ, specifically those implicated in tax evasion. Initially, 891 companies were identified from the U.S. Securities and Exchange

Commission (SEC) sanctions database, which includes firms sanctioned for various forms of fraud between 2010 and 2019.

The study period (2010–2019) was selected based on the availability and comprehensiveness of relevant data. This decade-long timeframe enables the analysis of trends and developments in audit practices and tax fraud, offering a broader temporal perspective for the research.

From the initial pool, 739 companies were excluded due to their involvement in frauds unrelated to tax offenses. This step was essential to narrow the focus to cases specifically concerning tax-related misconduct, ensuring alignment with the research objective on joint audits and tax evasion. Following this filtering process, an additional 127 companies were excluded due to missing annual reports or incomplete corporate governance data. The final sample thus consisted of 27 companies. While this refined sample allows for an in-depth examination, the relatively small size presents certain limitations. Specifically, the limited sample may affect the generalizability of the findings across all U.S. firms, particularly across diverse industries and company sizes. Moreover, the exclusion of firms due to incomplete data could introduce selection bias if the excluded entities systematically differ from those retained.

To mitigate these concerns, we acknowledge that the small sample size constrains the external validity of the study. Future research could enhance generalizability by expanding the sample or incorporating additional data sources. Furthermore, examining whether the characteristics of the excluded firms materially differ from those included may offer insights into potential biases.

Data collection was conducted via the DATA STREAM platform, ensuring the accuracy and timeliness of the financial and governance data. The dependent variable, TAX-FRAUD, was derived from the SEC sanctions database, which provides verified records of tax-related offenses. Data on the Joint Audit variable were manually extracted from firms' annual reports available on their official websites. This involved a thorough review of audit disclosures to determine the presence or absence of joint audit practices.

To enhance transparency and reproducibility, we detail the methods used to extract and verify joint audit data. Consistent criteria were applied to define and document joint audits, and information was cross-verified against official company disclosures. Challenges encountered during this process, such as inconsistencies in audit terminology across reports, were addressed through standardized review protocols. In conclusion, while the final sample of 27 companies provides a focused analysis of tax evasion in the context of joint audits, caution is warranted in interpreting the results. The limited sample size and potential selection bias underline the need for

future studies to expand the dataset and refine the data collection methodology to strengthen the robustness and representativeness of the findings.

3.2 The regression model and statistical tools

To assess the impact of joint audits on tax evasion, we employ the following regression model:

$$\text{TAX-FRAUD}_{it} = \beta_0 + \beta_1 \text{Joint-Audit} + \beta_2 \text{AC_EXP} + \beta_3 \text{AUDIT-FIRM-TENURE} + \beta_4 \text{SIZE}_{it} + \beta_5 \text{MKTBK}_{it} + \beta_6 \text{AGE}$$

With:

i = indicates companies $i = (1, \dots, 27)$

t = indicates the years ($t = 1, \dots, 10$)

β_0 : a constant

β_1 to β_5 : the coefficients of the variables

ε : the error term

Table 1 provides a summary of the various variables employed in our study.

Table 1. Summary table of variables

| Variables | Acronyms | Measures |
|---------------------------|--------------|---|
| Tax fraud | TAX_FRAUD | 0 otherwise |
| Joint-Auditor | JOINT_AUDIT | 1 if joint audit is done by the Internal Revenue Service (IRS), 0 if not |
| Audit committee expertise | AC_EXP | 1 if the company has an audit committee composed of at least three members and at least one "financial expert", 0 if no |
| Auditor rating | Audit tenure | The number of years after which the company rotates its auditor. |
| Company size | SIZE | Log (Total assets of the company) |
| The value of the company | MKTBK | <i>market value</i> |
| company age | AGE | <i>book value</i> The number of years from the day of incorporation of the company until the year of the study |

To assess the correlation between joint audits and tax evasion among publicly listed American companies, we employed SPSS version 20. The model is estimated using panel data, an econometric approach that accounts for both individual company effects and temporal variations. This methodology allows for a more accurate measurement of the impact of individual or concurrent actions, as well as potential synergies within the dataset.

4. Empirical analysis and interpretations of results

To address our research question, it is essential at this stage to analyse the results of our empirical investigation. We adopt a structured methodological approach, drawing on the framework proposed by Evrard *et al.* (2003), which comprises two main methodological categories:

- Descriptive statistics: used to summarize and characterize the explanatory variables;
- Bivariate analysis: employed to explore the correlations between the explanatory variables;
- Multivariate analysis: applied to investigate the relationships between variables within a comprehensive explanatory framework.

4.1. Descriptive statistics of explanatory variables

4.1.1 Variables of interest

Our primary variable of interest is “Joint Audit,” which captures the nature of the company’s external audit. This is a binary (dummy) variable that takes the value 1 if the company was subject to a joint audit involving the Internal Revenue Service (IRS), and 0 otherwise. The descriptive statistics for this variable are presented in the table below:

Table 2. Descriptive Statistics for the "Joint Audit" Variable

| Joint Audit | Frequency | Percentage |
|-------------|-----------|------------|
| 0 | 195 | 86.7% |
| 1 | 30 | 13.3% |
| Total | 225 | 100% |

According to the data presented in the table, our sample comprises 225 observations. Among these, 195 observations (86.7%) correspond to companies not subject to a joint audit, while 30 observations (13.3%) involve companies that underwent a joint audit.

The second variable of interest, "Audit Committee Expertise," captures the characteristics of the company’s internal audit mechanism. This binary variable takes the value 1 if the audit committee is composed of at least three members, including at least one financial expert, and 0 otherwise. The descriptive statistics related to this variable are presented in the following table:

Table 3. Descriptive Statistics for the “AC EXP” Variable

| AC EXP | Frequency | Percentage |
|--------|-----------|------------|
| 0 | 6 | 2.7% |
| 1 | 219 | 97.3% |
| Total | 225 | 100% |

According to the table, our sample comprises 225 observations. Among these, 219 observations (97.3%) correspond to companies with an audit committee composed of at least three members, including at least one financial expert, while only 6 observations (2.7%) do not meet this criterion.

Descriptive Statistics of the "Audit Firm Tenure" Variable

The third variable of interest, "Audit Firm Tenure," reflects the duration before a company changes its external auditor. This variable is measured by the number of years a company retains the same audit firm before initiating a rotation. The descriptive statistics for this variable are presented in the following table:

Table 4. Descriptive Statistics for the "Audit Firm Tenure" Variable

| N | Minimum | Maximum | Mean | Standard Deviation |
|-----|---------|---------|--------|--------------------|
| 225 | 1 | 26 | 13.302 | 6.996 |

The average value of the "Audit Firm Tenure" variable is 13.302 years, indicating that, on average, companies in our sample retain the same external auditor for approximately 13 years before initiating a rotation. The standard deviation is 6.996, reflecting a relatively low level of dispersion around the mean. This limited variability can be attributed to the homogeneity of the sample, as the duration of auditor tenure ranges from a minimum of 1 year to a maximum of 26 years.

4.1.2 Control variables

The descriptive statistics for the continuous control variables are summarized in the table below:

Table 5. Descriptive Statistics for Control Variables

| Variable | N | Minimum | Maximum | Mean | Standard Deviation |
|----------|-----|---------|---------|-------|--------------------|
| SIZE | 225 | 5.241 | 9.384 | 7.17 | 0.945 |
| MKTBK | 225 | -82.83 | 13.88 | 1.89 | 5.999 |
| AGE | 225 | 11 | 227 | 72.56 | 49.535 |

These statistics reveal the following characteristics of our continuous control variables:

- **SIZE:** Measured as the natural logarithm of total assets, the company size ranges from a minimum of 5.241 to a maximum of 9.384, with a mean value of approximately 7.17. Applying the natural logarithm reduces disparities between observations, which is reflected in the relatively low standard deviation of 0.945.
- **MARKET-TO-BOOK Ratio:** Calculated as the ratio of market value to book value, this variable has a mean of 1.89. However, it exhibits considerable variability, ranging from -82.83 to 13.88, with a high standard deviation of 5.999.

- **AGE:** Defined as the number of years since the company's founding, firm age varies widely, from 11 to 227 years, with an average of 72.56 years. The substantial standard deviation of 49.535 indicates significant heterogeneity in the ages of the companies within our sample.

4.2 Bivariate analysis: Analysis of correlations between explanatory variables

Bivariate analysis is conducted to examine the correlations between pairs of explanatory variables and to identify potential multicollinearity issues. Multicollinearity is a common statistical concern that occurs when independent variables exhibit a high degree of correlation with each other. In regression modelling, it is crucial that explanatory variables remain largely independent to ensure reliable coefficient estimates.

In the context of logistic regression, where independent variables are not required to follow a normal distribution, the Pearson correlation coefficient is an appropriate metric for detecting multicollinearity. According to Evrard *et al.* (2003) and Jolibert and Jourdan (2006), a Pearson correlation coefficient of 0.7 or higher signals a potential multicollinearity problem.

To further assess multicollinearity, diagnostic tests such as the Variance Inflation Factor (VIF) and tolerance values are employed. Multicollinearity is considered problematic when the VIF exceeds 2 and the tolerance falls below 0.2 (Evrard *et al.*, 2003).

4.2.1 Pearson correlation matrix

Table 6 summarizes the Pearson correlation coefficients among the explanatory variables used in our study.

Table 6. Pearson correlation matrix

| | TAX_FRAUD | Joint Audit | AC_EXP | Audit firm tenure | SIZE | MKTBK | AGE |
|-------------------|-----------|-------------|---------|-------------------|---------|---------|---------|
| TAX_FRAUD | 1 | - | -0.139* | -0.119* | 0.025 | -0.142* | 0.198** |
| Joint Audit | -0.279** | 1 | -0.097 | 0.064 | 0.150* | -0.012 | -0.125 |
| AC_EXP | -0.139* | -0.097 | 1 | 0.098 | -0.145* | 0.015 | 0.053 |
| Audit firm tenure | -0.119 | 0.064 | 0.098 | 1 | 0.305** | 0.110 | 0.369** |
| SIZE | -0.031 | 0.150* | -0.145* | 0.305** | 1 | -0.082 | 0.510** |
| MKTBK | -0.142* | -0.012 | 0.015 | 0.110 | -0.082 | 1 | -0.129* |
| AGE | 0.198** | -0.125 | -0.053 | 0.369** | 0.510** | -0.129* | 1 |

** : the correlation is significant at the 0.01 level (two-sided).

* : the correlation is significant at the 0.05 level (bilateral).

All observed correlation coefficients are below the 0.7 threshold commonly associated with multicollinearity concerns. Therefore, we conclude that there is no evidence of multicollinearity among the explanatory variables in our study.

4.2.2 General diagnosis of multi-collinearity

To further evaluate the overall level of multicollinearity, we computed the Variance Inflation Factor (VIF) and Tolerance (the reciprocal of VIF). Table 7 summarizes the results of these diagnostic tests.

Table 7. VIF collinearity and tolerance statistics

| Variable | LIVELY | 1/VIF |
|-------------------|--------|----------|
| AGE | 1.64 | 0.610680 |
| SIZE | 1.57 | 0.635401 |
| Audit Firm Tenure | 1.32 | 0.759777 |
| Joint_Audit | 1.18 | 0.846240 |
| MKTBK | 1.06 | 0.947051 |
| AC EXP | 1.05 | 0.948055 |

In light of the results obtained from the bivariate analysis, we can confidently proceed with the binary logistic regression analysis, as no significant multicollinearity issues were detected among the explanatory variables included in the model.

4.3 Multivariate analysis: logistic regression analysis

To address our research question and assess the impact of the presence of a joint auditor on tax evasion practices among American companies, we proceed with the presentation and interpretation of the logistic regression results. Evaluating the model's quality is a crucial step to ensure its validity and robustness, thereby guaranteeing the reliability of the findings.

4.3.1 Model quality assessment

Table 8, the classification table, allows us to assess the model's strength based on the "overall percentage" and the "correct percentage". The classification table indicates an overall predictive accuracy of 58.2%. In other words, the model correctly classifies 58.2% of the cases, meaning that if a company exhibits the characteristics specified by the model, there is a 58.2% probability that it will be correctly identified as engaging in tax evasion within the American context.

Table 8. Ranking table

| Observations | | | Forecasts | | |
|--|----------|---|-----------|---|-----------------------|
| | | | TAXFRAUD | | Correct percentage |
| | | | 0 | 1 | |
| Step 0 | TAXFRAUD | 0 | 131 | 0 | 100.0 |
| | | 1 | 94 | 0 | .0 |
| Overall percentage | | | | | 58.2 |
| To. The constant is included in the model. | | | | | |
| b. The hyphenation value is .500 | | | | | |

The likelihood ratio test, presented in Table 9, is used to evaluate the overall goodness of fit of the logistic regression model (Bressoux, 2008). It compares the fit of the full model, which includes all explanatory variables, to that of a null model containing only the intercept. A statistically significant result from this test indicates that the inclusion of the explanatory variables significantly improves the model's explanatory power.

Table 9. Model fit information

| Model | -2 log likelihood | Lhi-two | GIS |
|---------|-------------------|---------|-------|
| Initial | 305.804 | | |
| Final | 251.250 | 54.554 | 0.000 |

The table presents the likelihood ratio test along with the chi-square statistic. In our study, the likelihood ratio test statistic is calculated at 54.554, derived from the difference between the -2 log-likelihood of the null model (305.804) and that of the fitted model (251.250). While the absolute value may not appear high, it remains sufficiently large to assess the improvement in model fit resulting from the inclusion of explanatory variables.

This statistic follows a chi-square distribution and is associated with a p-value of 0.000. Since this value is well below the conventional 1% significance level ($p < 0.01$), we conclude that the model is statistically significant. Thus, the logistic regression model proves to be robust and appropriately specified for analyzing the determinants of tax evasion in the context of U.S.-listed companies.

Nagelkerke's R^2 serves as an adjusted measure of the proportion of variance in the dependent variable explained by the model. In our study, the adjusted Nagelkerke's R^2 is estimated at 34.8%, suggesting that the model explains approximately one-third of the variability in tax evasion practices among U.S.-listed companies. This level of explanatory power is considered acceptable within the context of social sciences, where complex behaviors are influenced by numerous factors. It underscores the relevance of the model and its capacity to provide insightful predictions regarding the influence of the selected independent variables.

Table 10 displays the outcomes of the Hosmer-Lemeshow test applied to our model.

Table 10. Hosmer-Lemeshow test

| Stage | Chi-Chi-square | dof | sig. |
|-------|----------------|-----|-------|
| 1 | 6.006 | 8 | 0.647 |

Upon examination, we find that the predicted values closely match the observed data. This is supported by a p-value of 0.647, which exceeds the conventional threshold of 0.05. Consequently, we can conclude that the model demonstrates a satisfactory level of adequacy and goodness-of-fit.

4.3.2 Presentation and interpretation of regression results

Table 11 provides the results derived from the binary logistic regression applied in our study.

Table 11. Results of binary logistic regression

| | B | ES | Wald | GIS | EXP (B) |
|---------------------------|--------|-------|-------|----------|---------|
| JOINT AUDIT | -3.154 | 1.049 | 9.032 | 0.003*** | 0.043 |
| Audit Firm Tenure | -0.19 | 0.025 | 0.605 | 0.437 | 0.981 |
| Audit Committee Expertise | -3.980 | 1.674 | 5.652 | 0.017** | 0.019 |
| SIZE | -0.463 | 0.215 | 4.650 | 0.031** | 0.629 |
| MKTBK | -0.317 | 0.110 | 8.336 | 0.004*** | 0.728 |
| AGE | 0.009 | 0.004 | 5.126 | 0.024** | 1.009 |

**: significant at the 5% level
***: significant at the 1% level

The key findings are as follows:

The regression analysis highlights a negative and statistically significant relationship between joint audits and tax evasion, thus confirming our first hypothesis. In particular, firms subjected to joint audits are less likely to engage in tax evasion practices within the U.S. context. This result corroborates earlier findings emphasizing the deterrent effect of joint audits. Spicer and Thomas (1982) demonstrated that joint audits enhance scrutiny, thereby discouraging tax evasion. Similarly, Alm and McKee (2006) as well as Devos (2013) provided empirical evidence of the efficacy of joint audits in curbing tax-related misconduct through more thorough financial examinations. More recent contributions also support this view, suggesting that the presence of multiple auditors reinforces oversight and reduces the incidence of fraudulent behaviour.

Concerning the second hypothesis, the results show a negative association between audit committee expertise and tax evasion. Firms with audit committees comprising at least three members, including a financial expert, tend to exhibit lower levels of tax evasion. This outcome is in line with prior literature emphasizing the role of audit committee competence in fraud prevention. Farber (2005) found that effective audit committees are linked to reduced financial misconduct. Similarly, Abbott and Parker (2000) noted that the presence of financial expertise within audit committees diminishes the likelihood of fraudulent practices. Recent studies have reinforced these findings, stressing the pivotal role of well-qualified audit committees in enhancing financial oversight and deterring tax evasion (Widarjo *et al.*, 2024; Chemingui *et al.*, 2023; Dang & Nguyen 2022).

The analysis of auditor tenure reveals that this variable is statistically non-significant ($\beta = -0.019$, Sig = 0.437 > 0.1; Exp(B) = 0.981). While the negative coefficient suggests that firms with more frequent auditor rotations might be marginally less inclined to engage in tax evasion, the effect is not statistically meaningful. This result aligns with the findings of DeAngelo (1981a) and more recent contributions by Alidoust *et al.* (2020), both of which indicate that auditor tenure has a limited direct impact on tax evasion. These studies suggest that although auditor rotation may influence audit quality and independence, its effect on tax compliance behavior remains weak or inconclusive.

Control Variables:

- **Company Size (SIZE):** This variable is statistically significant at the 5% level (Sig = 0.031 < 0.05) and exhibits a negative relationship with tax evasion. Larger firms appear less likely to engage in tax evasion, a result supported by recent research indicating that such firms typically possess more structured internal controls and are subject to higher levels of external scrutiny.
- **Market-to-Book Ratio (MKTBK):** Significant at the 1% level, this variable also demonstrates a negative association with tax evasion. Firms with higher market-to-book ratios are less inclined to evade taxes, likely due to their enhanced visibility and accountability to shareholders and regulators. These findings are consistent with those of Williams and Davis (2021), who noted that firms with greater enterprise value tend to adopt more conservative tax strategies.
- **Company Age (AGE):** Contrary to conventional expectations, this variable shows a positive and statistically significant relationship with tax evasion (Sig < 0.05), indicating that older firms are more likely to engage in such practices. This may reflect the persistence of legacy practices, reduced external oversight over time, or a perceived ability to navigate complex tax environments more aggressively, as suggested by Everaert *et al.* (2007).

In summary, these results offer a nuanced understanding of the determinants of tax evasion in the U.S. corporate context. While joint audits and audit committee expertise play significant roles in mitigating tax evasion, auditor tenure appears to

have a limited effect. Furthermore, company characteristics—such as size, market valuation, and age—exert varying influences, underscoring the importance of considering firm-specific factors in the design of effective tax compliance policies.

5. Conclusion

The prevailing global financial landscape has intensified governmental efforts to curb revenue leakage, particularly by mitigating activities such as tax evasion. This research aims to scrutinize the role of joint audits in combating tax evasion within the American context. Using agency theory and stewardship theory as foundational frameworks, we conducted an extensive literature review on the relationship between joint audits and tax evasion.

Our study employs binary logistic regression on a sample of 27 publicly listed American companies over the period from 2010 to 2019. The analyses yield noteworthy results. Specifically, the presence of a joint auditor has a significant negative impact on the incidence of tax evasion, suggesting that companies subject to joint audits are less inclined to engage in tax evasion, thereby affirming the efficacy of joint audits as a deterrent.

Our findings also reveal a significant negative correlation between audit committee expertise and the prevalence of tax evasion, whereas auditor turnover exhibits a negative but statistically non-significant effect. These results are supported by recent studies and theoretical perspectives derived from agency theory. According to agency theory, which highlights the inherent conflict of interest between shareholders (principals) and managers (agents), effective oversight mechanisms—such as a knowledgeable audit committee—can mitigate opportunistic behaviors like tax evasion (Jensen & Meckling, 1976). Consistent with this framework, Huang and Thiruvadi (2010) find that the presence of a financial expert on the audit committee significantly reduces financial fraud, including tax evasion, by enhancing the committee's capacity to detect and address fraudulent activities. Similarly, Klein (2002) demonstrates that audit committees with financial expertise and regular meetings are more effective in mitigating financial reporting issues.

In contrast, the relationship between auditor turnover and tax evasion, while theoretically compelling, shows only a marginal practical impact. Agency theory suggests that frequent auditor changes could potentially reduce collusion between auditors and managers (DeAngelo, 1981b); however, recent studies provide a more nuanced view. Carcello *et al.* (2004) emphasize that while longer auditor tenure may improve understanding and reduce penalties, excessively long relationships risk fostering complacency. Therefore, the practical impact of auditor turnover on reducing tax evasion appears less significant than theoretical expectations suggest.

Our results underscore the critical role of audit committee expertise in combating tax evasion through improved oversight and accountability, while the effects of auditor turnover are more complex and less definitive. These findings highlight the importance of maintaining a strong audit committee and interpreting auditor turnover with caution. Future research should further investigate these dynamics to enhance our understanding of effective strategies to reduce tax evasion.

As with any research endeavour, certain limitations must be acknowledged. The primary constraint is the sample composition, which exclusively comprises listed American companies. Differences in audit environments across countries, influenced by cultural and regulatory variations, limit the generalizability of our results. Additionally, focusing solely on listed companies—subject to specific governance rules and standards—represents another potential limitation.

These limitations open avenues for future research to deepen our understanding of the relationship between joint audits and tax evasion. Exploring this relationship in diverse international contexts and extending the analysis to include samples of unlisted companies, across varying sizes and organizational forms, would contribute to a more comprehensive understanding of these interconnected concepts.

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