

Do female auditors affect accruals quality? A replication and extension of Ittonen, Vahamaa, and Vahamaa (2013)

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Abstract

Purpose: This study aims to replicate the findings of Ittonen et al. (2013) on the relationship between female audit partners and accruals quality, which showed that firms audited by female partners had lower abnormal accruals. While their study focused on the Scandinavian context, known for its progressive gender norms, this research assesses the generalizability of their results by extending the analysis to Italy, a country with different cultural views on gender roles.

Design/methodology/approach: Using an OLS regression model, this study analyzes Italian listed firms during the 2013-2022 period. We sourced financial data from Aida, provided by Bureau Van Dijk, and we manually collected audit partner names from corporate governance reports. Our final sample includes 1,068 firm-year observations from 232 firms.

Findings: Our results are consistent with those of Ittonen et al. (2013), who found that female audit partners are associated with lower abnormal accruals. We observed similar results when including female audit committee chairs. No gender-based differences emerged in reducing income-increasing earnings management. However, female audit partners were associated with lower income-decreasing manipulations, indicating greater diligence and precision.

Originality/value: We replicate the study by Ittonen et al. (2013) within the distinct cultural and legal framework of the Italian market, with a broad time period for analysis. Our findings underscore the importance of gender diversity in auditing and provide robust evidence for a different context. Future research can investigate other

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countries and factors affecting audit quality to further deepen the understanding of gender dynamics.

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1. Introduction

In the governance debate, the topic of gender diversity has been attracting the attention of regulators, financial statement users, and researchers in the last decades (Garcia-Blandon et al., 2019). Studies in psychology and behavioral economics have demonstrated that there are differences in preferences, attitudes, and risk appetites between men and women (Ciappei et al., 2023). Therefore, it is expected that these personal traits might be reflected in firm outcomes when men and women influence the firm's decision process. Prior studies provide evidence of gender differences in various aspects of accounting and financial reporting choices. For instance, research shows that the presence of women in top management teams is associated with lower earnings management and greater conservatism in accounting choices (Francis et al., 2015; Ho et al., 2015; Peni & Vähämaa, 2010).

Ittonen et al. (2013) investigated the association between the gender of the audit partners and accruals quality during the 2005–2007 period. Specifically, they found that the client firms with female audit engagement partners had smaller absolute abnormal accruals in their reported earnings. However, they were examining the Scandinavian context, particularly Norway and Finland, which have notably progressive cultural norms regarding gender equality (Martinez-Garcia et al., 2024). This cultural backdrop may raise doubts about the generalizability of their results to contexts with different cultural attitudes. Therefore, this study aims to replicate the findings of Ittonen et al. (2013) in the Italian setting, which is characterized by different cultural perspectives on gender roles. Our choice of the Italian context is motivated by several reasons.

First, the Italian and Scandinavian contexts present several institutional and financial similarities. Both settings share characteristics such as a small capital market and high ownership concentration (Bouaziz et al., 2020), a high tax rate (Menicacci, 2022), and debt-dominated markets (Cameran et al., 2018). The comparability between the institutional and financial environments allows us to

limit the potential effects related to market or institutional differences on accounting choices and earnings management incentives (Dechow et al., 2010).

Additionally, Finland, Sweden, and Italy comply with the European Union (EU) Directive 2014/95/EU on the disclosure of non-financial and diversity information (EU, 2014a), which ensures that the process to become a certified auditor is considerably similar across these countries (Iazzi et al., 2023). Auditors in these settings must possess both theoretical education and practical experience, and they are required to successfully complete a practical examination to obtain their certification. Moreover, unlike in other contexts such as the United States (US) or the United Kingdom (UK), where only the name of the responsible audit firm is public, it is mandatory to disclose the identity of the audit partner(s) in the audit reports in Finland, Sweden, and Italy. This makes Italian firms a particularly suitable setting to empirically examine the effects of auditor gender on accruals quality.

However, Italy, Finland, and Sweden are also characterized by significant cultural differences, especially regarding the role of women in society and in the workplace (Martinez-Garcia et al., 2024). While Scandinavia is characterized by a progressive attitude toward gender equality, Italy is more conservative in its cultural attitudes toward gender roles (Terjesen et al., 2015). This stark contrast between the two contexts provides a unique opportunity to explore the generalizability of findings from the Scandinavian context to a setting where cultural norms regarding gender equality are markedly different.

Finally, firms evolve over time, leading to the development of new governance mechanisms and interactions that may alter the findings of previous research. Indeed, more than 10 years have been passed since the study of Ittonen et al. (2013) was published. This decade has seen significant developments in achieving gender equality, including the gender quota law in the EU, resulting in changes in the institutional context and corporate governance structure, as well as across the broader society. Therefore, we contribute to the literature by examining the same framework in a different historical context, allowing us to test whether the findings remain consistent in this new regulatory and societal environment.

As in Ittonen et al. (2013), we hand-collected data on the gender of audit partners from the audit reports, and our results show that the gender of the audit partner affects the quality of financial reporting. Specifically, our findings indicate that female audit partners are associated with lower earnings management; this is consistent with gender socialization theory (Mason & Mudrack, 1996), which predicts that women tend to exhibit greater ethical behavior and scrutiny in the decision-making process. Following DeFond and Park (2001), we also include a third measure of accruals quality that is

specifically tailored for capital markets characterized by their small and youthful nature, akin to the Italian market (Cameran et al., 2018; Mattei et al., 2012). Our results further confirm the results of Ittonen et al. (2013) that firms with female auditors are associated with lower abnormal accruals.

This study adds to the literature on gender equality in the accounting and audit fields by providing evidence of the negative association between the client firms of female audit engagement partners and their abnormal accruals. These results are consistent with findings that female auditors' attention to detail and their cautious approach may mitigate risks, ensuring a more accurate representation of financial health and protecting minority shareholders from potential expropriation (Lai et al., 2017; Gull et al., 2018; Condie et al., 2023). Additionally, we shed light on the influence of cultural, regulatory, and institutional features. In particular, we examine a regulatory framework where gender quotas are mandatory, which is different from the original study. Finally, by extending the original sample period to include the latest legislative reforms and recommendations, our study adds valuable insights to the ongoing debate and calls for future research on gender equality and its influence on firm outcomes in the fields of accounting and auditing research (e.g., Lai et al., 2017; Gull et al., 2018; Condie et al., 2023).

Our study is structured as follows. Section 2 introduces the literature and reports the hypotheses presented in Ittonen et al. (2013). Section 3 defines the sample selection process and the methodology. Section 4 presents the results, while Section 5 provides the additional analyses. Finally, Section 6 concludes the study.

2. Background and hypotheses

2.1. Institutional background

Most of the recent studies investigating the association between women auditors and firm outcomes have widely applied data from common law countries, such as the US (Lai et al., 2017), the UK (Abdelfattah et al., 2021), and Australia (Aldamen et al., 2018). Ittonen et al. (2013) provide empirical results analyzing countries that are not common law—in particular, the Swedish and Finnish environments. The Scandinavian civil law system offers a lower level of investor protection compared to that of common law systems (Mnif Sellami & Cherif, 2020). Prior literature provides evidence that countries characterized by lower shareholder protection create a favorable environment for managers to exercise discretion over the assets of non-control-

ling shareholders, often through earnings manipulation (Gull et al., 2018). For example, Leuz et al. (2003) demonstrate that these countries tend to have lower-quality information, which is reflected in higher audit risk. Specifically, the authors found a negative relationship between the investors' protection and audit fees.

Considering cultural factors, Sweden and Finland are among the few European countries that have not mandated a gender quota law for the board of directors but have rather adopted a "comply or explain" approach to gender equality in top corporate positions (Martinez-Garcia et al., 2024); both countries have established codes of good corporate governance that include recommendations for board gender diversity. Due to their structural and socio-economic conditions, Sweden and Finland consistently rank highest in Europe for women's representation in both corporate boards and parliamentary positions (Martinez-Garcia et al., 2024). This emphasis on women's empowerment is viewed as a progressive process, with gender equality evolving as a national cultural value (Martinez-Garcia et al., 2024).

Given the variation in cultural, economic, and regulatory environments, as well as in gender equality regimes, we remain uncertain as to whether the findings of Ittonen et al. (2013) can be generalized to other countries with different cultural and regulatory systems. Notably, their study is limited to two countries with shared legal origins and histories.

In the Italian context, the financial scandals involving Cirio and Parmalat have triggered the implementation of new regulations (Iazzi et al., 2023). Consequently, Italy has begun to introduce various supervisory and preventive measures that have contributed to the development of a complex and diverse corporate governance framework. Similar to Finland and Sweden, the Italian stock market is characterized by a high concentration of ownership among listed companies and relatively weaker investor protections (Leuz et al., 2003; La Porta et al., 2000). Additionally, Italy follows a comparable process to Finland and Sweden for certifying auditors, where auditors are required to acquire both theoretical knowledge and practical experience and to successfully complete a practical examination to attain certification.

A country's institutional context is important for explaining corporate governance practices. While corporate governance regulations and cultural factors differ between Sweden, Finland, and Italy, the latter has enacted strict laws to enhance female participation on boards of directors and among statutory auditors in listed firms, notably through Law n. 120/2011, commonly referred to as the Golfo-Mosca Law (Iazzi et al., 2023; Paoloni et al., 2024). Paoloni et al. (2024) demonstrate that institutional pressure has played a crucial role in the homogenization of gender diversity compliance among Italian

companies. Their analysis highlights a convergence process across firms characterized by isomorphic behavior and changes in the quality of gender diversity reporting. Specifically, institutional pressures have had the most significant impact in fostering the standardization of disclosure practices related to gender diversity. Given that the adoption of regulations aimed at promoting gender equality within companies could reduce disparities among countries, we replicate the study by Ittonen et al. (2013) in the post-gender quota law period within an Italian context.

2.2. Earnings management and gender equality

The quality of financial reporting can be compromised by management manipulation of accounting information, abusing the discretion allowed by accounting principles and reporting standards (Menicacci, 2022; Riise Johansen et al., 2020), and managers hold the power to either report financial information accurately or manipulate earnings for personal gain (Christie & Zimmerman, 1994). Abnormal accruals are employed to measure financial reporting quality and assess discretionary earnings components (Cameran et al., 2018; Mattei et al., 2012).

Opportunistic managers may overstate earnings, making it crucial for external auditors, boards, and governance actors to constrain excessive earnings management. Reforms – such as the Sarbanes-Oxley Act (SOX) of 2002 (Pub. L. 107-204) in the US (US Congress, 2002), EU Regulation No. 537/2014 on specific requirements regarding the statutory audit of public-interest entities (EU, 2014b), and Law 262/2005 in Italy (Italian Parliament, 2005) – emphasize the critical role of auditors in ensuring the integrity of financial reporting. These regulations mandate stringent oversight, enhance transparency, and enforce auditor independence to bolster the reliability of corporate disclosures.

Numerous studies have explored the behavioral differences between male and female auditors and their impact on financial reporting quality, often focusing on the relationship between auditor gender and audit quality or accruals (Condie et al., 2023). For instance, Abdelfattah et al. (2021) found that female auditors detect more potential misstatements compared to their male counterparts. Similar findings have also been supported by more recent research (e.g., Hardies et al., 2016). However, Hossain et al. (2018) provided evidence in an Australian setting that female audit partners were less likely to issue going concern opinions for financially distressed clients.

Ittonen et al. (2013), using a sample of Finnish and Swedish listed firms, showed that firms audited by female auditors exhibited lower levels of abnormal accruals, both in income-increasing and income-decreasing earnings management. Similar results have been provided by Garcia-Blandon et al. (2019), who analyzed Spain. Finally, Mechelli et al. (2024) analyzed the context of higher education public institutions, finding that audit reports with higher quality were more likely to be issued by female-chaired audit teams. These findings align with previous studies, which attribute these outcomes to both the inherent traits of women and contextual factors such as lower litigation risk.

2.3. Gender-based differences and hypotheses development

The relationship between gender equality and firm financial and non-financial outcomes have been examined from various theoretical perspectives at the macro, meso, and micro levels (Martinez-Garcia et al., 2024), with particular emphasis on resource dependence theory and agency theory (e.g., Garcia-Blandon et al., 2019). These frameworks provide a rationale for how higher female participation in leadership positions improves the diversity and quality of resources and enhances oversight functions (Ciappei et al., 2023). Along with these theories, socialization theory (Mason & Mudrack, 1996) has been used to explain why gender is a critical factor to predict company social engagement (e.g., Martinez-Garcia et al., 2024) because it explains that psychological and cognitive differences exist between men and women in ethical and moral decision making (Hardies et al., 2016). Mason and Mudrack (1996) suggest that women are more likely to act ethically in situations involving moral dilemmas, such as earnings management. Women are consistently less likely to be overconfident, aggressive, and competitive, as well as more emotional., making them more risk-averse than men (Ciappei et al., 2023). For example, Hardies et al. (2016) demonstrate that women auditors show greater risk aversion and ethical behavior but that they also possess a heightened ability to gather voluntary information, potentially reducing information asymmetry between the audit company and its clients. If women are mostly found to be more conservative and risk-averse in firm outcomes (Ittonen et al., 2013; Ciappei et al., 2023), this should also be reflected in the audit context. Therefore, female auditors should be more likely to reduce earnings management practice than their male counterparts. Accordingly, our first hypothesis (H_1) is as follows:

H₁: The client firms of female audit engagement partners have higher accruals quality than firms audited by male audit partners.

Furthermore, if women behave more ethically and are more conservative than their male counterparts, these characteristics may also influence their approach to the financial reporting process. Thus, Ittonen et al. (2013) also develop a second hypothesis that women auditors may be more diligent in constraining income-increasing (income-decreasing) earnings management, which involve overstating (understating) assets and revenues (liabilities and expenses) to artificially alter earnings. Although income-decreasing earnings management is often viewed as less misleading to investors (Menicacci, 2022), it can be used to smooth the perceived riskiness of a firm, creating hidden reserves that can be leveraged to window dress financial reports in later periods. Considering that female auditors are generally more risk-averse and meticulous, we argue that their presence is likely to reduce both types of earnings management. Based on these expectations, we state the following hypotheses (H₂):

H_{2a}: The client firms of female audit engagement partners are associated with lower income-increasing abnormal accruals than firms audited by male audit partners.

H_{2b}: The client firms of female audit engagement partners are associated with lower income-decreasing abnormal accruals than firms audited by male audit partners.

3. Research design

3.1. Sample selection

The data used in the empirical analysis consist of the Italian firms listed in the Milan Stock Exchange as of March 2024. Our initial sample is sourced from Aida provided by Bureau Van Dijk (BvD) for financial data, while we hand-collected the names of the audit engagement partners from the firms' corporate governance reports. The first available year in our dataset is 2013 because Aida BvD imposes a 10-year limit on available financial data, and 2022 is the most recent year for which financial data were accessible at the time our data collection began. From the initial sample of 411 listed firms, we excluded 117 financial institutions (SIC codes 6000-6900) due to their unique characteristics, resulting in a sample of 294 non-financial listed firms,

comprising 2,910 firm-year observations. We then manually collected the names of the audit engagement partners from the firms' audit reports. This led us to exclude 1,063 firm-year observations due to missing corporate governance information. We also excluded 405 observations due to the lack of information on the number of years the auditor had served as audit partner. Finally, we removed 341 firm-year observations due to a lack of historical stock price information, as well as missing financial information for 33 firm-year observations. Our final sample consists of 1,068 firm-year observations for 232 Italian non-financial listed firms during the 2013–2022 period, as reported in Table 1 Panel A.

Table 1 Panel A – Reports the sample selection process

#firm-year observations	Sample selection process
4,110	Firm-year observations as listed in the Milan Stock Exchange as of March 2024
(1,200)	Firm-year observations from the financial industry (SIC code: 6000–6999)
(1,063)	Missing corporate governance data
(1,842)	Missing accounting and financial data
1,068	Final sample [$t = 2013, 2022$] [232 firms]

Table 1 Panel B shows our sample distribution classified by industry and auditor gender. Overall, the number of female auditors has consistently increased over the years, despite their participation being lower than that reported by Ittonen et al. (2013). However, this trend appears to be consistent with the different cultural and social contexts of gender equality in Italy, Finland, and Sweden.

Table 1 Panel B – Number of female auditors by industry

INDUSTRY	2013		2014		2015		2016		2017	
	# firms	# female auditors	# firms	# female auditors	# firms	# female auditors	# firms	# female auditors	# firms	# female auditors
<i>Agriculture, forestry and fishing</i>	1	0	1	0	1	1	1	1	1	1
<i>Mining</i>	9	3	11	4	12	4	13	2	15	3
<i>Manufacturing</i>	20	1	23	2	24	3	18	2	24	3
<i>Transportation and public utilities</i>	7	0	7	1	9	2	15	2	13	2
<i>Wholesale</i>	3	0	5	1	4	0	6	0	7	0
<i>Retail trade</i>	9	1	14	2	17	2	19	2	22	3
<i>Services</i>	4	1	4	1	5	1	4	1	4	1
Total	53	6	65	11	72	13	76	10	86	13

Continues..

INDUSTRY	2018		2019		2020		2021		2022	
	# firms	# female auditors	# firms	# female auditors	# firms	# female auditors	# firms	# female auditors	# firms	# female auditors
<i>Agriculture, forestry and fishing</i>	2	1	2	1	5	1	4	0	6	0
<i>Mining</i>	16	2	19	1	18	1	19	1	19	0
<i>Manufacturing</i>	29	6	39	7	39	8	49	8	57	9
<i>Transportation and public utilities</i>	12	1	14	1	16	1	19	1	23	1
<i>Wholesale</i>	9	0	15	0	14	0	15	1	24	3
<i>Retail trade</i>	23	3	32	4	37	3	41	4	50	6
<i>Services</i>	6	1	7	1	9	1	12	1	15	2
Total	97	14	128	15	138	15	159	16	194	21

Table 1 Panel B reports the number of female auditors per year and industry, where *#firms* is the number of firms per year and *#femaleauditors* is the number of female auditor partners.

3.2. Variables description

3.2.1. Dependent variable

The dependent variable in our model is the amount of abnormal accruals. Consistent with Ittonen et al. (2013), we estimate abnormal accruals with the two accruals quality models mostly used in prior studies – namely, the modified Jones model (1991) and the Dechow and Dichev model (2002). We also add a third measure of abnormal accruals estimated with the approach of Ashbaugh et al. (2003).

Specifically, our first measure of abnormal accruals is *AAJON*, estimated as the residual term of the modified Jones (1991) model, adjusted for past performance (Kothari et al., 2005). The dependent variable in this model is the amount of total accruals, measured as the difference between operating income and cash flows. The independent variables are change in cash revenues (i.e., the difference between the change in sales and the change in receivables); the gross value of property, plant, and equipment; and the firm performance (*ROA*). The variables are scaled by the lagged value of total assets. We include year and industry fixed effects in order to control for potential heterogeneity in the accruals-generating process across years and industries.

Our second measure of abnormal accruals is *AADD*, estimated as the residual term of the Dechow and Dichev (2002) model. In this model, the dependent variable is working capital accruals, while the independent variables are past, present, and future cash flows. The variables are scaled by the three-year average of total assets (Dechow & Dichev, 2002). In order to control for

potential heterogeneity in the accruals-generating process across years and industries, we include year and industry fixed effects.

Finally, our third measure of abnormal accruals is *AAASH*, estimated as the residual term of the Jones (1991) model, performed following the approach of Ashbaugh et al. (2003). In this model, the normal amount of total accruals is estimated as a function of change in cash revenues and property, plant, and equipment. The variables are scaled by the lagged value of total assets. In this model, we also include year and industry fixed effects in order to control for potential heterogeneity in the accruals-generating process across years and industries.

3.2.2. Main independent variable

The main independent variable in our regression model is *FEMALE*, which is a dummy variable that equals 1 if the auditor partner is a woman and zero if otherwise. Data on the identity of audit partners were hand-collected from the audit reports. Ittonen et al. (2013) also include the ratio between female auditors and all audit engagement partners as an alternative measure of *FEMALE*. This variable is designed to control for audits with two or more engagement partners. In our study, we do not replicate this analysis, as there are no cases of multiple engagement audit partners.

3.2.3. Control variables

To allow for the comparability of the empirical results, we include the same set of control variables as in Ittonen et al. (2013), except for two variables: the proportion of foreign sales of total sales (due to the lack of data availability) and a dummy variable controlling for the existence of an audit committee (as Italian listed companies are required to have an audit committee).

Specifically, we control for the firm dimension in terms of *SIZE*, calculated as the natural logarithm of total assets; *MB*, as the ratio of market to book value of equity; performance level as measured by the return on assets (*ROA*); and *SGRTH*, which is the annual rate of revenue growth. We control for the risk exposure of the company in terms of leverage (*LEV*), which is measured by the total liabilities divided by total assets, and *LOSS*, which is a dummy variable equal to 1 if the firm reports negative net income and zero if otherwise. We also include the operating cash flow, which is measured as the cash flow from operations scaled by total assets (*OCF*), and current assets (*INVREC*), which is meas-

ured as the total inventories and receivables divided by total assets. Furthermore, we control for the audit firms' characteristics that may affect earnings management. Specifically, we include *BIG4*, which is a dummy variable equal to 1 if the firm is audited by a Big 4 audit company and zero if otherwise. We also control for the experience of the audit partner, including the natural logarithm of the number of years the auditor has served as audit partner (*AAGE*). Finally, we control for the industry expertise (*AINDEXP*) of the audit partner, including a dummy variable equal to 1 if the market share of the auditor (measured in terms of the client's total assets) within the same industry and year is greater than or equal to 10% and zero if otherwise. Non-dummy variables are winsorized at the 1 and 99% levels to moderate the effects of outliers.

3.3. Econometric model

We examine the association between abnormal accruals and the gender of the firm's audit partner using an ordinary least squares (OLS) regression model including fixed effects at the industry and year levels. Given that our sample firms are observed over multiple years, this model is suitable for testing the linear relationship between abnormal accruals and the gender of the firm's audit partner. Moreover, the inclusion of industry fixed effects allows us to control for time-invariant factors that are specific to each industry, ensuring that our results are not biased by persistent industry-level characteristics; the inclusion of year fixed effects further controls for time-specific shocks or macroeconomic trends that could affect all firms in a given year, enhancing the robustness of our analysis. Specifically, our regression model is described as follows:

$$\begin{aligned}
 AA_{i,t} = & \beta_0 + \beta_1 FEMALE_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 LEV_{i,t} + \beta_4 ROA_{i,t} + \beta_5 LOSS_{i,t} + \\
 & \beta_6 OCF_{i,t} + \beta_7 INVREC_{i,t} + \beta_8 SGRTH_{i,t} + \beta_9 MB_{i,t} + \beta_{10} BIG4_{i,t} + \\
 & \beta_{11} AAGE_{i,t} + \beta_{12} AINDEXP_{i,t} + Year\ Fixed\ Effects + \\
 & Industry\ Fixed\ Effects + \varepsilon_{i,t}
 \end{aligned} \tag{i}$$

where $AA_{i,t}$ is one of the three variable specifications capturing abnormal accruals for firm i in year t , estimated alternatively using the Jones model (1991) ($AAJON_{i,t}$), the Dechow and Dichev model (2002) ($AADD_{i,t}$), and the Ashbaugh et al. (2003) ($AAASH_{i,t}$) model.

In order to test our first hypothesis (H_1) concerning the level of earnings management, we use the absolute value of abnormal accruals ($|AAJON_{i,t}|$, $|AADD_{i,t}|$, or $|AAASH_{i,t}|$) to take into account both income-increasing and income-decreasing accruals-based earnings management. In order to test our second hypothesis (H_2), we use positive abnormal accruals to assess the extent of income-increasing earnings management and the absolute value of negative abnormal accruals to assess the extent of income-decreasing earnings management. This ensures that, in both cases, the variables increase with the level of manipulation, making higher values consistently represent greater earnings management.

4. Empirical findings

4.1. Descriptive statistics and univariate tests

Table 2 Panel A reports the statistics for the full sample of 1,068 firm-year observations. Consistent with Ittonen et al. (2013), the sample firms are heterogeneous and differ in terms of size, performance, and auditor characteristics. The logarithm of total assets ranges from 7.944 (€2.8 million) to 18.203 (€80.4 billion), with a mean value of 12.133 (€186 million). The mean (median) value for the financial debt ratio is 51.40% (52.70%). Furthermore, Table 2 Panel A shows that 74.00% of firms have a Big 4 audit firm. The *ROA* value ranges from -39.00% to 23.00%, with a mean value of 1%.

Table 2 Panel A – Descriptive statistics for the full sample (no. = 1,068)

	mean	st. dev.	min	median	max
<i>AAJON</i>	0.025	0.030	0.000	0.016	0.207
<i>AADD</i>	0.064	0.070	0.001	0.042	0.357
<i>AAASH</i>	0.025	0.031	0.000	0.016	0.215
<i>SIZE</i>	12.133	2.016	7.944	11.992	18.203
<i>LEV</i>	0.514	0.214	0.028	0.527	1.135
<i>ROA</i>	1.081	8.969	-39.210	1.325	23.050
<i>LOSS</i>	0.283	0.451	0.000	0.000	1.000
<i>OCF</i>	0.044	0.113	-0.614	0.054	0.288
<i>INVREC</i>	0.352	0.187	0.030	0.341	0.854
<i>SGRTH</i>	0.098	0.405	-0.935	0.043	1.975
<i>MB</i>	0.003	0.003	0.000	0.002	0.019
<i>BIG4</i>	0.739	0.440	0.000	1.000	1.000
<i>AAGE</i>	2.087	0.811	0.000	2.197	3.466
<i>AINDEXP</i>	0.168	0.374	0.000	0.000	1.000

Table 2 Panel A reports the descriptive statistics for the full sample.

Table 2 Panel B reports the descriptive statistics for the subsample of 134 firm-year observations with a female audit partner. The data show that firm *SIZE* ranges from a minimum of 7.944 (€2.8 million) to a maximum value of 18.144 (€75.8 billion). An average company in our sample shows a mean *SIZE* value of 12.712 (€315.8 million), indicating that firms audited by female partners are generally larger than those in the overall sample. The financial debt ratio for these firms averages 52.10%, with a similar median of 54.01%, which is slightly higher than the full sample. The *ROA* in this subsample ranges from -23.43% to 23.05%. Additionally, 83.60% of these firms are audited by Big 4 audit firms.

Table 2 Panel B – Descriptive statistics for firms with female audit partners (no. = 134)

	mean	st. dev.	min	median	max
<i>AAJON</i>	0.018	0.015	0.000	0.015	0.085
<i>AADD</i>	0.060	0.053	0.001	0.048	0.316
<i>AAASH</i>	0.018	0.015	0.000	0.014	0.081
<i>SIZE</i>	12.712	2.082	7.944	12.208	18.144
<i>LEV</i>	0.521	0.208	0.028	0.541	0.883
<i>ROA</i>	2.064	5.521	-23.430	2.285	23.050
<i>LOSS</i>	0.231	0.423	0.000	0.000	1.000
<i>OCF</i>	0.047	0.075	-0.338	0.051	0.288
<i>INVREC</i>	0.374	0.189	0.030	0.375	0.846
<i>SGRTH</i>	0.091	0.434	-0.918	0.022	1.975
<i>MB</i>	0.002	0.003	0.000	0.002	0.013
<i>BIG4</i>	0.836	0.372	0.000	1.000	1.000
<i>AAGE</i>	1.986	0.746	0.000	1.946	3.219
<i>AINDEXP</i>	0.299	0.459	0.000	0.000	1.000

Table 2 Panel B reports the descriptive statistics for firms with female auditors.

Finally, Table 2 Panel C presents the t-statistics tests for determining potential significant differences between the two samples of firms with male or female auditor partners. The results show that, on a univariate basis, two out of the three measures of abnormal accruals, *AAJON* and *AAASH*, show a positive and statistically significant difference for firms audited by male audit partners (p-value < 0.05). Consistent with the results of Ittonen et al. (2013), our t-test analysis reveals that the subsample of female audit partners are from bigger companies compared to the subsample of firms with their male counterparts (p-value < 0.01). In our sample, 83.60% of client firms of female audit engagement partners are also typically audited by a Big 4 firm (p-value < 0.01). Overall, except for the aforementioned variables, the two subsamples do not present notable differences.

Table 2 Panel C – T-test for firms with male and female audit partner

	Male auditors	Female auditors	t-value	p-value
AAJON	0.026	0.018	2.350	0.019
AADD	0.065	0.060	0.550	0.575
AAASH	0.026	0.018	2.300	0.022
SIZE	12.050	12.712	-3.550	0.001
LEV	0.512	0.521	-0.450	0.648
ROA	0.940	2.064	-1.350	0.175
LOSS	0.290	0.232	1.400	0.158
OCF	0.043	0.048	-0.450	0.666
INVREC	0.350	0.373	-1.400	0.159
SGRTH	0.099	0.090	0.200	0.843
MB	0.003	0.003	1.000	0.309
BIG4	0.725	0.836	-2.750	0.006
AAGE	2.101	1.986	1.550	0.126
AINDEXP	0.149	0.298	-4.350	0.000

Table 2 Panel C reports the t-test for firms with male and female audit partner.

4.2. Pairwise correlation

Table 3 presents the pairwise correlation matrix. Our test variable, *FEMALE*, exhibits a negative and statistically significant correlation with *AAJON* and *AAASH* (p-value < 0.05). Conversely, *FEMALE* is positively associated with *SIZE*, *BIG4*, and *AINDEXP*, which is consistent with the findings reported in the t-test statistics. According to prior studies (Abdelfattah et al., 2021), our measures of abnormal accruals are positively correlated with *LEV* (at least, p-value < 0.05) and *LOSS* (p-value < 0.01). Furthermore, abnormal accruals measures show negative and statistically significant correlations with firm size, operative performance (*ROA*), liquidity assets (*OCF*, *INVREC*), and audit quality (*BIG4*).

Table 3 – Pairwise correlation matrix

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	
FEMALE	(1)	1.000							
AAJON	(2)	-0.083**	1.000						
AADD	(3)	-0.027	0.047	1.000					
AAASH	(4)	-0.081**	0.972***	0.026	1.000				
SIZE	(5)	0.109***	-0.246***	-0.211***	-0.205***	1.000			
LEV	(6)	0.014	0.076**	0.226***	0.074**	0.264***	1.000		
ROA	(7)	0.042	-0.342***	-0.245***	-0.303***	0.228***	-0.209***	1.000	
LOSS	(8)	-0.043	0.168***	0.241***	0.157***	-0.272***	0.061**	-0.577***	
OCF	(9)	0.013	-0.072**	-0.196***	-0.027	0.184***	-0.217***	0.698***	
INVREC	(10)	0.043	-0.111***	0.021	-0.091**	-0.185***	0.236***	0.138***	
SGRTH	(11)	-0.007	-0.043	-0.030	-0.046	0.009	-0.034	0.196***	
MB	(12)	-0.031	0.031	0.120**	0.029	-0.071**	0.039	0.053*	
BIG4	(13)	0.084***	-0.137***	-0.159***	-0.110***	0.522***	0.083***	0.096***	
AAGE	(14)	-0.047	-0.107***	-0.083*	-0.106***	0.217***	0.090***	-0.025	
AINDEXP	(15)	0.133***	-0.034	-0.104**	-0.017	0.459***	0.029	0.071**	
Continues...									
		(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
LOSS	(8)	1.000							
OCF	(9)	-0.571***	1.000						
INVREC	(10)	-0.026	0.042	1.000					
SGRTH	(11)	-0.140**	0.118***	0.042	1.000				
MB	(12)	-0.046	0.027	-0.128***	-0.025	1.000			
BIG4	(13)	-0.133***	0.052*	-0.124***	-0.047	0.015	1.000		
AAGE	(14)	0.017	-0.037	-0.050*	-0.006	0.025	0.200***	1.000	
AINDEXP	(15)	-0.104***	0.024	-0.146***	0.069*	0.067**	0.175***	0.172***	1.000

Table 3 reports the correlation matrix. Number of observations: 1,068. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

4.3. Regression results

Table 4 reports the estimation results of our panel regressions with absolute values of abnormal accruals as the dependent variable. We estimate three alternative regressions with different abnormal accruals measures ($|AAJON|$ in model 1, $|AADD|$ in model 2, and $|AAASH|$ in model 3). The values of the adjusted R^2 in model 1 and model 3 are approximately 30%, while the adjusted R^2 in model 2 is around 19%, consistent with the results of Ittonen et al. (2013).

Table 4 – Female audit partner and the absolute value of abnormal accruals

	(1)	(2)	(3)
VARIABLES	AAJON	AADD	AAASH
FEMALE	-0.005*** (0.002)	0.001 (0.007)	-0.006*** (0.002)
SIZE	-0.004*** (0.001)	-0.007*** (0.002)	-0.003*** (0.001)
LEV	0.016** (0.007)	0.086*** (0.019)	0.014* (0.007)
ROA	-0.002*** (0.000)	-0.001 (0.001)	-0.002*** (0.000)
LOSS	0.000 (0.003)	0.016 (0.011)	0.003 (0.003)
OCF	0.100*** (0.029)	0.011 (0.054)	0.115*** (0.032)
INVREC	-0.014** (0.006)	-0.036** (0.018)	-0.007 (0.007)
SGRTH	-0.000 (0.003)	0.007 (0.009)	-0.001 (0.003)
MB	-0.164 (0.284)	1.906 (1.326)	-0.105 (0.318)
BIG4	0.004 (0.004)	-0.015 (0.013)	0.006 (0.004)
AAGE	-0.003*** (0.001)	-0.003 (0.003)	-0.004*** (0.001)
AINDEXP	0.010*** (0.003)	-0.006 (0.009)	0.012*** (0.003)
Constant	0.060*** (0.013)	0.169*** (0.047)	0.049*** (0.014)
Industry f.e.	YES	YES	YES
Year f.e.	YES	YES	YES
No. obs.	790	436	790
Adj. R-squared	0.308	0.187	0.296

Table 4 presents the results of model (i). t statistics in parentheses, standard errors are clustered by firm. ***, **, * denote significance at the 1%, 5%, and 10% percent levels, respectively.

The estimated coefficients for the female auditor variable (*FEMALE*) are associated in a negative and statistically significant way with the accruals quality measures in two out of the three regression models (p -value < 0.01), specifically model 1 and model 3. Therefore, our findings confirm the first research hypothesis (H_1) that the client firms of female auditors are associated with better accruals quality. Overall, our findings are consistent with Ittonen et al. (2013) and support that women are more risk-averse than their male counterparts (e.g., Ciappei et al., 2023; Garcia-Blandon et al., 2019). Furthermore, the coefficient estimates for the other control variables are consistent with Ittonen et al. (2013) and other prior studies (e.g., Cameran et al., 2018; Riise Johansen et al., 2020).

In order to further examine the relationship between auditor gender and accruals quality, we divide the sample between income-decreasing and income-increasing earnings management, according to the sign of the abnormal accruals. We count 80 firm-year observations with female audit partners in the income-increasing subsample and 25 firm-year observations in the income-decreasing subsample. Columns (1) to (6) of Table 5 report the results of the alternative regression specifications with positive and absolute values of negative abnormal accruals as the dependent variables.

Table 5 – Female audit partner and income-increasing and income-decreasing accruals

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	AAJON	AAJON	AADD	AADD	AAASH	AAASH
<i>FEMALE</i>	0.002 (0.001)	-0.015*** (0.004)	0.006 (0.011)	-0.003 (0.012)	0.002 (0.001)	-0.014*** (0.004)
<i>SIZE</i>	-0.001** (0.000)	-0.006*** (0.002)	-0.007* (0.004)	-0.006* (0.003)	-0.001* (0.000)	-0.005* (0.002)
<i>LEV</i>	0.001 (0.003)	0.043*** (0.015)	0.071*** (0.026)	0.099*** (0.027)	-0.001 (0.003)	0.029 (0.024)
<i>ROA</i>	-0.001*** (0.000)	-0.004*** (0.000)	-0.001 (0.001)	-0.001 (0.002)	0.000 (0.000)	-0.004*** (0.001)
<i>LOSS</i>	-0.004*** (0.002)	-0.007 (0.008)	-0.006 (0.015)	0.037** (0.018)	-0.001 (0.002)	-0.009 (0.008)
<i>OCF</i>	-0.034*** (0.006)	0.323*** (0.081)	-0.036 (0.061)	0.071 (0.098)	-0.026*** (0.006)	0.258*** (0.092)
<i>INVREC</i>	-0.014*** (0.003)	-0.004 (0.020)	-0.023 (0.032)	-0.043* (0.023)	-0.010*** (0.003)	-0.004 (0.021)
<i>SGRTH</i>	-0.002 (0.001)	-0.003 (0.007)	-0.006 (0.013)	0.017 (0.013)	-0.003** (0.001)	-0.003 (0.008)
<i>MB</i>	0.074 (0.154)	-0.512 (0.653)	2.184 (1.767)	1.664 (1.954)	0.143 (0.142)	-1.143 (1.191)
<i>BIG4</i>	0.002 (0.002)	-0.001 (0.006)	-0.027* (0.016)	-0.005 (0.020)	0.002 (0.002)	0.001 (0.007)
<i>AAGE</i>	-0.002*** (0.001)	-0.003 (0.003)	-0.002 (0.005)	-0.006 (0.005)	-0.002*** (0.000)	-0.005* (0.003)
<i>AINDEXP</i>	0.005*** (0.002)	0.010 (0.008)	-0.013 (0.013)	0.004 (0.012)	0.006*** (0.001)	0.016* (0.009)
<i>Constant</i>	0.037*** (0.010)	0.083*** (0.030)	0.259*** (0.058)	0.107* (0.061)	0.028*** (0.009)	0.081** (0.035)
<i>Industry f.e.</i>	YES	YES	YES	YES	YES	YES
<i>Year f.e.</i>	YES	YES	YES	YES	YES	YES
<i>No. obs.</i>	489	301	213	223	512	278
<i>Adj. R-squared</i>	0.523	0.489	0.248	0.189	0.447	0.460

Table 5 presents the results for income-increasing and income-decreasing accruals. t statistics in parentheses, standard errors are clustered by firm. ***, **, * denote significance at the 1%, 5%, and 10% percent levels, respectively

Consistent with Ittonen et al. (2013), the coefficient for *FEMALE* is negative and statistically significant at the 1% level in Column (2) with the absolute negative Jones (1991) accruals (*/AAJON/*) and in Column (6) with the absolute negative Ashbaugh et al. (2003) accruals (*/AAASH/*). We do not find any statistically significant association for income-increasing earnings management, as reported in Columns (1), (3), and (5). Our results are consistent with those of Ittonen et al. (2013), with the exception that they also reported a negative association between female audit partners and positive abnormal accruals estimated using the Dechow and Dichev (2002) model.

Our results indicate that gender-based differences in deterring earnings management are stronger for income-decreasing manipulation. That is, while there are no differences between male and female audit partners in the constraint of income-increasing earnings management, female audit partners are more effective than their male counterparts in reducing income-decreasing manipulation. Overall, our results are consistent with previous studies showing that women tend to be more risk-averse and conservative than their male counterparts (e.g., Abdelfattah et al., 2020; Ciappei et al., 2023; Martinez-Garcia et al., 2024).

5. Additional tests

We run a set of additional tests as robustness checks, following Ittonen et al. (2013). First, considering our research setting, we add another measure of abnormal accruals, estimated following DeFond and Park (2001). We choose this proxy of accruals quality as it is particularly suitable for the Italian context, where the stock market is relatively young and small (Cameran et al., 2018). Our fourth measure of abnormal accruals (*AADFP_{i,t}*) is the absolute value of abnormal working capital accruals (*AWCA_{i,t}*) measured as follows:

$$AWCA_{i,t} = WC_{i,t} - (WC_{i,t-1} * S_{i,t}/S_{i,t-1}) \quad (ii)$$

where *WC_{i,t}* is the actual level of working capital observed in year *t* for firm *i*, scaled by total assets; the second term of the equation (*WC_{i,t-1} * S_{i,t}/S_{i,t-1}*) is the predicted value of working capital, which is the prior year working capital adjusted for the change in sales.

We then re-estimate the regression model (1) with the abnormal current accruals as the dependent variable. The estimation results are reported in Column (1) of Table 6, which shows a negative and statistically significant

association between *FEMALE* and *|AADFP|* (p -value < 0.05), supporting our main findings that the presence of a female audit partner is associated with lower earnings management. Furthermore, Column (2) and Column (3) of Table 6 report the estimates based on positive and absolute negative abnormal accruals subsamples. Consistent with Ittonen et al. (2013), there is a negative and statistically significant association between the coefficient for *FEMALE* and positive accruals.

Table 6 – Robustness test. Alternative measure of accruals quality

VARIABLES	(1)	(2)	(3)
	Full Sample	Income-Increasing Accruals Subsample	Income-Decreasing Accruals Subsample
	<i> AADFP </i>	<i>AADFP</i>	<i> AADFP </i>
<i>FEMALE</i>	-0.687** (0.300)	-0.961** (0.418)	0.020 (0.168)
<i>SIZE</i>	-0.075 (0.183)	0.003 (0.288)	-0.265* (0.136)
<i>LEV</i>	-1.119 (1.194)	-0.985 (1.636)	2.110 (1.464)
<i>ROA</i>	-0.040 (0.034)	-0.071 (0.053)	-0.096** (0.042)
<i>LOSS</i>	1.596*** (0.511)	3.173*** (0.770)	-0.701* (0.376)
<i>OCF</i>	1.197 (3.238)	7.951 (4.975)	1.430 (5.043)
<i>INVREC</i>	-3.266*** (0.781)	-3.363*** (1.104)	-1.532 (0.995)
<i>SGRTH</i>	-0.665 (0.727)	-0.865 (0.909)	0.605 (0.697)
<i>MB</i>	-105.113** (42.634)	-163.971*** (55.879)	-24.447 (49.137)
<i>BIG4</i>	0.042 (0.516)	-0.152 (0.818)	0.048 (0.281)
<i>AAGE</i>	-0.109 (0.191)	-0.343 (0.259)	0.187 (0.124)
<i>AINDEXP</i>	0.451 (0.493)	0.175 (0.731)	0.081 (0.535)
Constant	4.683** (2.080)	3.550 (3.125)	3.194 (2.089)
Industry f.e.	YES	YES	YES
Year f.e.	YES	YES	YES
No. obs.	786	509	277
Adj. R-squared	0.191	0.279	0.327

Table 6 presents the results using *AADFP* as alternative dependent variable. t statistics in parentheses, standard errors are clustered by firm. ***, **, * denote significance at the 1%, 5%, and 10% percent levels, respectively

Second, since our findings may be affected by potentially redundant variables (Ittonen et al., 2013), we re-estimate the regression model employing *SIZE*, *ROA*, and *MB* as the only control variables.¹ Considering our first hypothesis, the untabulated results support our main findings presented in Table 4. Specifically, the coefficient for *FEMALE* is negative and statistically significant using $|AAJON|$ and $|AAASH|$ as proxies of accruals quality, suggesting that female auditors are associated with higher accruals quality. Regarding our second hypothesis, the untabulated results for the income-increasing and the income-decreasing subsamples support our main findings presented in Table 5. Specifically, the coefficient for *FEMALE* is negative and statistically significant for the income-decreasing subsamples, using $|AAJON|$ and $|AAASH|$ as proxies of accruals quality. These results confirm the existence of significant differences between male and female audit partners in constraining income-decreasing earnings management.

Third, in order to ensure that our results are not affected by multicollinearity, we replicate Ittonen et al. (2013) and re-estimate all regressions with *ROA* as the only control variable for performance. Overall, the results of our additional tests provide evidence that a female audit partner is associated with lower earnings management. These results are consistent with our main findings and those of Ittonen et al. (2013), suggesting that female audit partners are more effective than male audit partners in reducing income-decreasing manipulation.

In addition, the audit committee plays a crucial role in monitoring earnings quality in the Italian setting (Mechelli et al., 2024). Therefore, we include the gender of the audit committee chair (*FEMALE_ACC*) to control for potential confounding factors. In Italy, the audit committee has a distinct and essential function within corporate governance. Unlike in other countries where the audit committee operates as a sub-committee of the board of directors, in Italy, it is an independent body responsible for overseeing financial reporting accuracy and ensuring compliance with legal standards. The committee not only monitors the company's internal controls but also plays a key role in supervising the external auditor's work (Rizzotti & Greco, 2013).

To consider this aspect, we manually collected data on the gender of the audit committee chairs from corporate governance reports. Our sample includes 192 observations where the audit committee chair is female, representing approximately 18% of the total sample. This relatively low proportion reflects the broader cultural landscape in Italy, where, despite regulatory efforts to promote gender equality, leadership roles are still predominantly held by men. Although gender diversity on boards has improved following legislative reforms such as the introduction of gender quotas, the representation of women in top executive and oversight positions remains limited.

¹ The results are available upon request.

The estimation results are reported in Table 7 Panel A, showing that both the presence of a female audit partner and the presence of a female chair of the audit committee are associated with lower absolute values of abnormal accruals. The results in Table 7 Panel B confirm our main results that female audit partners are more effective in reducing income-decreasing manipulation, after controlling for the gender of the audit committee's chair.

Table 7 Panel A – Robustness test. Controlling for female audit committee's chair and absolute abnormal accruals

	(1)	(2)	(3)
VARIABLES	AAJOM	AADD	AAASH
FEMALE	-0.005*** (0.002)	0.001 (0.007)	-0.006*** (0.002)
FEMALE_ACC	-0.004** (0.002)	-0.006 (0.007)	-0.004** (0.002)
SIZE	-0.004*** (0.001)	-0.007*** (0.003)	-0.003*** (0.001)
LEV	0.016** (0.007)	0.088*** (0.019)	0.015** (0.007)
ROA	-0.002*** (0.000)	-0.001 (0.001)	-0.002*** (0.000)
LOSS	0.000 (0.003)	0.016 (0.011)	0.003 (0.003)
OCF	0.100*** (0.029)	0.012 (0.054)	0.115*** (0.032)
INVREC	-0.014** (0.006)	-0.036** (0.018)	-0.008 (0.007)
SGRTH	-0.001 (0.003)	0.007 (0.009)	-0.002 (0.003)
MB	-0.162 (0.284)	1.931 (1.325)	-0.103 (0.317)
BIG4	0.005 (0.004)	-0.014 (0.013)	0.007* (0.004)
AAGE	-0.003** (0.001)	-0.003 (0.003)	-0.004*** (0.001)
AINDEXP	0.010*** (0.003)	-0.007 (0.009)	0.011*** (0.003)
Constant	0.060*** (0.013)	0.168*** (0.048)	0.049*** (0.014)
Industry f.e.	YES	YES	YES
Year f.e.	YES	YES	YES
No. obs.	790	436	790
Adj. R-squared	0.311	0.188	0.299

Table 7 Panel A provides results by including *FEMALE_ACC* as an additional control variable. t statistics in parentheses, standard errors are clustered by firm. ***, **, * denote significance at the 1%, 5%, and 10% percent levels, respectively.

Table 7 Panel B – Robustness test. Controlling for female audit committee’s chair and positive and negative abnormal accruals

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	AAJON	AAJON	AADD	AADD	AAASH	AAASH
<i>FEMALE</i>	0.002 (0.001)	-0.014*** (0.004)	0.005 (0.011)	-0.003 (0.012)	0.002 (0.001)	-0.014*** (0.004)
<i>FEMALE_ACC</i>	-0.001 (0.001)	-0.002 (0.004)	-0.012 (0.011)	-0.008 (0.013)	-0.000 (0.001)	-0.005 (0.006)
<i>SIZE</i>	-0.001** (0.000)	-0.006*** (0.002)	-0.007* (0.004)	-0.006* (0.003)	-0.001* (0.000)	-0.004* (0.003)
<i>LEV</i>	0.001 (0.003)	0.044*** (0.015)	0.076*** (0.027)	0.100*** (0.027)	-0.001 (0.003)	0.030 (0.023)
<i>ROA</i>	-0.001*** (0.000)	-0.004*** (0.000)	-0.001 (0.001)	-0.001 (0.001)	0.000 (0.000)	-0.004*** (0.001)
<i>LOSS</i>	-0.004*** (0.002)	-0.007 (0.008)	-0.007 (0.015)	0.037** (0.017)	-0.001 (0.002)	-0.009 (0.008)
<i>OCF</i>	-0.034*** (0.006)	0.323*** (0.082)	-0.030 (0.061)	0.066 (0.097)	-0.026*** (0.006)	0.257*** (0.091)
<i>INVREC</i>	-0.014*** (0.003)	-0.005 (0.020)	-0.024 (0.031)	-0.042* (0.023)	-0.010*** (0.003)	-0.005 (0.021)
<i>SGRTH</i>	-0.002 (0.001)	-0.004 (0.007)	-0.007 (0.014)	0.017 (0.013)	-0.003** (0.001)	-0.003 (0.008)
<i>MB</i>	0.068 (0.156)	-0.503 (0.655)	2.157 (1.757)	1.678 (1.965)	0.140 (0.143)	-1.005 (1.166)
<i>BIG4</i>	0.002 (0.002)	-0.000 (0.006)	-0.025 (0.016)	-0.004 (0.020)	0.002 (0.002)	0.001 (0.007)
<i>AAGE</i>	-0.002*** (0.001)	-0.003 (0.003)	-0.002 (0.005)	-0.006 (0.005)	-0.002*** (0.000)	-0.006* (0.003)
<i>AINDEXP</i>	0.005*** (0.002)	0.010 (0.008)	-0.016 (0.014)	0.003 (0.012)	0.006*** (0.001)	0.015 (0.009)
<i>Constant</i>	0.037*** (0.010)	0.083*** (0.030)	0.261*** (0.058)	0.102 (0.064)	0.028*** (0.009)	0.079** (0.036)
<i>Industry f.e.</i>	YES	YES	YES	YES	YES	YES
<i>Year f.e.</i>	YES	YES	YES	YES	YES	YES
N. obs.	489	301	213	223	512	278
Adj. R-squared	0.524	0.490	0.251	0.191	0.447	0.462

Table 7 – Panel B provides results by including *FEMALE_ACC* as an additional control variable, and positive and negative abnormal accruals. t statistics in parentheses, standard errors are clustered by firm. ***, **, * denote significance at the 1%, 5%, and 10% percent levels, respectively.

Finally, to account for potential distortions caused by the COVID-19 pandemic, we conducted two robustness tests. First, we excluded the post-pandemic years (2020, 2021, and 2022) from the analysis. Second, we introduced a COVID dummy variable (equal to 1 for years 2020 and beyond and zero if otherwise) and interacted it with the variable *FEMALE* to examine the pandemic’s

effect on the relationship between female audit partners and earnings management. The untabulated results show that the pandemic period did not alter the relationship between female audit partners and earnings management.

6. Discussion and conclusions

Building upon the findings of Ittonen et al. (2013), our study re-examines the association between the client firms of female audit engagement partners and their reported earnings for a sample of Italian listed firms during the 2013–2022 period. Consistent with Ittonen et al. (2013), our findings show that the presence of a female auditor partner is associated with lower abnormal accruals. However, our findings show no significant gender-based differences between male and female audit partners in constraining income-increasing earnings management. Rather, compared to their male counterparts, female audit partners are associated with lower negative manipulations.

This finding suggests that female auditors exhibit greater diligence and precision. Specifically, negative earnings manipulation is often perceived as less significant and less misleading to investors (Menicacci, 2022; Mechelli et al., 2024). However, income-decreasing manipulation presents significant risks, especially in a context characterized by high ownership concentration, such as the Italian market (Cameran et al., 2018). Such manipulation can conceal the expropriation of minority shareholder rights, as it may involve retaining dividends or creating hidden reserves to hide financial issues (Achleitner et al., 2014). Female auditors' attention to detail and their cautious approach may mitigate these risks, ensuring a more accurate representation of financial health and protecting minority shareholders from potential expropriation.

This gender-based difference in auditor behavior may stem from broader societal expectations and professional standards. Prior research suggests that female professionals often adhere more strictly to ethical guidelines and exhibit higher levels of conscientiousness. In the context of auditing, this translates into a lower tolerance for manipulative practices that could harm the truthfulness of financial reporting. Our findings align with these perspectives, highlighting that female auditors may be particularly effective in contexts where the risks of downward income manipulation are high and the implications for minority shareholders are severe.

This study makes the following contributions. It contributes to the literature by replicating and extending the findings of Ittonen et al. (2013) in a different cultural and temporal context, providing new evidence on the relationship between audit partner gender and accruals quality. By analyzing the

Italian context, which is characterized by more conservative cultural attitudes towards gender roles compared to the Scandinavian context, we are able to test the generalizability of the original findings. Furthermore, given that more than 10 years have passed since the original study was published, our work adds to the debate on the evolution of governance practices and regulatory changes, such as the introduction of gender quota laws in the EU (e.g., Lai et al., 2017; Condie et al., 2023; Paoloni et al., 2024). This allows us to assess the relevance and potential impact of introducing similar gender diversity regulations in more culturally conservative contexts.

Moreover, we provide evidence on the association between a female auditor partner and abnormal accruals by analyzing a setting where a mandatory gender quota law is enforced. While the Scandinavian and Italian contexts share certain similarities, they differ significantly in their approaches to gender equality legislation. Finland and Sweden rely on voluntary measures to increase female participation, while Italy has implemented mandatory quotas. Our findings emphasize that the implementation of mandatory gender regulations can be particularly effective in promoting gender diversity, especially in contexts where cultural barriers to gender equality may exist.

The study is subject to at least three limitations. First, a key limitation of our analysis is the relatively small number of observations with female audit partners, particularly in the income-decreasing subsample. This highlights the still limited presence of women in senior positions such as audit engagement partner within the current business landscape. While our econometric model yields statistically significant results, the small sample size may slightly affect the generalizability of the findings and should be kept in mind when interpreting the results. Second, the models used for estimating earnings management, despite their widespread use, are not free from measurement issues. In particular, misclassification issues can include Type I errors, i.e., labeling normal accruals as abnormal, and Type II errors, i.e., labeling abnormal accruals as normal (Dechow et al., 2010). Third, in addition to auditor gender, other auditor characteristics such as experience and educational background should also be investigated.

To address these limitations, future research could explore the relationship between auditor gender and other audit characteristics with respect to different attributes of earnings quality, such as conservatism, timely loss recognition, or smoothing. This would expand our understanding of auditor gender diversity and earnings quality. For instance, if an auditor's overscrupulousness limits the use of accounting discretion to convey information about future firm prospects, a positive association in terms of accruals quality or conservatism could reduce the value relevance of earnings.

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