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Gender, Legal Origin, and Accounting Disclosure: Evidence from More Than 140,000 Firms

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Abstract

We explore the hypothesis that the gender of a firm's manager and a country's legal origin are important factors influencing whether or not firms hire external auditors to prepare their financial statements. International evidence from 140,860 unique firms surveyed in 139 countries over the period 2008–2022 offers significant support for our hypothesis. In particular, our results suggest that: (1) the probability of female-managed firms producing externally audited financial statements is 1.42 percentage points (or 0.03 standard deviation) lower than their male-managed counterparts; (2) the probability of producing externally audited financial statements by firms in common law origin countries is 7 percentage points (or 0.14 standard deviation) higher than for firms located in civil law origin countries; and (3) the lower frequency with which female-managed firms in our sample report audited financial statements is exacerbated when the firms are located in a common law country. We verify that these results are robust with respect to a number of other considerations, including endogeneity issues, alternative proxies for key variables, additional confounding factors, and potential outliers. Our results contribute to the literature on the relationships between manager characteristics, firm disclosure, and country legal environment.

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1 Introduction

Financial reporting standards (such as the International Financial Reporting Standards (IFRS) and the Generally Accepted Accounting Principles (GAAP)) have been adopted in many countries to enhance corporate transparency and for comparability of accounting practices. However, many studies highlight the variations in the levels of accounting disclosure in different countries, showing that the mere adoption of these reporting standards is not sufficient to ensure uniformity of disclosure practices across countries (Ball, 2016; Santos et al., 2022). This variation in disclosure practices has received significant attention and findings from prior research indicate that variations in accounting disclosure practices are associated with and strongly influenced by factors such as national institutions, management gender, national legal origin, cultural values and environment with mixed conclusions (Gray, 1988; Doupnik and Salter, 1995; Zarzeski, 1996; Jaggi and Low, 2000; Mazzi et al., 2018).

In particular, some studies provide evidence to suggest that national legal origins (whether the legal system grew from common law or civil law) significantly influence accounting disclosure (Gray, 1988; Jaggi and Low, 2000; La Porta et al., 2008). Other studies argue that management gender plays a key role in the levels of corporate disclosure since the activity is usually human managed (Erhardt et al., 2003; Huse and Solberg, 2006; Schubert, 2006; Nalikka, 2009). The significance of both gender and legal origin in influencing accounting disclosure has been recognised and widely explored, and prior research has shown the different ways they separately influence accounting disclosures. Existing arguments emphasise the strength of legal origin in explaining the levels of accounting disclosure (Jaggi and Low (2000), for example) and other studies argue that gender plays an important role in influencing performance (Erhardt et al., 2003; Nalikka, 2009). The relative significance of gender and legal origin or whether they are complementary in their impact on accounting disclosure has been relatively neglected. This is a critical shortcoming: While legal origin or gender are individually likely to play a role in explaining the variation in accounting disclosure of firms, they may not be equally significant when both factors are taken into account (Hope, 2003). In this study we attempt to bring some clarity to this empirical question.

We seek to understand the impact of the gender of senior managers and national legal origin on the variation in accounting disclosure of firms. We empirically test whether there are variations in firms accounting disclosure between countries with different legal origin, and we evaluate whether a firm's accounting disclosures are influenced by management gender within countries of the same legal origin. The study is based on data for the fiscal years 2008–2022 for 140,860 firms across 139 countries. We conclude that gender, independently of legal origin, significantly impacts accounting disclosure, with female management having a negative impact on disclosure practices. We also found that the level of accounting disclosure is higher for firms in countries with common law origin than it is in countries with civil law origin. Overall, the study provides abundant evidence to show that accounting disclosures by

firms with female managers are lesser than those of firms with male managers in countries with common law backgrounds.

Our work makes several contributions to the existing literature. First, this is the first study to examine the impact of gender, legal origin, and their interaction on accounting disclosure of firms. It provides robust empirical evidence on the impact of gender and legal origin on accounting disclosure. Most articles have examined the individual influence of gender or legal origin on accounting disclosures without considering the impact of the wider context on each of the variables. Thus this article contributes to existing literature by combining two streams of research: (1) the influence of legal origin on the variations in a firm's accounting disclosure (Ball et al., 2000; Jaggi and Low, 2000; Jorgensen and Sabino, 2002; Hope, 2003); and (2) the impact of gender on the level of accounting disclosure in a firm (Erhardt et al., 2003; Huse and Solberg, 2006; Schubert, 2006; Nalikka, 2009).

Second, the increased focus on the importance of gender diversity in corporate boards and the pressure on companies for more female representation specifically (Rose, 2007; Adams and Ferreira, 2009) makes it important to understand the influence that gender exerts on corporate performance and disclosure given a country's legal tradition. That is, whether the impact of management gender on accounting disclosure is dependent on legal origin, and hence whether there is a case for greater gender participation or not in company management. Our study supports cautioning policymakers against blanket imposition of quotas for female representation in private sector senior management and highlights the downsides of lower levels of accounting disclosure of female-managed firms, particularly in firms with common law origin.

Finally, the findings of this study provide reconciliations of the mixed findings in the gender literature on the effect of gender on corporate performance by addressing some identified shortcomings in existing studies that may have brought about the disparate findings. In doing this, we emphasise the role of gender on the production of financial information by firms. We argue that, although firms in countries with common law origin have higher levels of disclosure compared to firms in civil law origin countries, female-managed firms with common law origin are less likely to provide high levels of accounting disclosure.

In Section 2, we briefly review the accounting disclosure literature with an emphasis on the importance of gender and legal origins for the variations in firm accounting disclosure. We then introduce our model to discuss the association between gender, legal origin, their interaction, and accounting disclosure, whilst developing our hypotheses. In the third and fourth sections, we describe the research design and results, respectively. Robustness checks of our benchmark results are presented in section five. We conclude the study with a discussion on the implications for policy, practice, and future research in section six.

2 Background literature and hypotheses development

2.1 A brief literature review

Existing studies assert from varying theoretical perspectives the dominant impact of legal origin in explaining the variations in the accounting disclosures of firms (see Ball et al. (2000) and Jorgensen and Sabino (2002), for example). Ball et al. (2000), for example, highlight the difference in agency problems in countries with different legal origins, arguing that there is a constant demand for information on firms in countries with the common law origin, where the relationship between firms and outside parties, such as investors, lenders, and so on can often be at arm's length. In contrast, in civil law countries, where investors are more involved in the management and decision-making of firms, these stakeholders obtain information directly and there is less pressure on the firm for information disclosure. Furthermore, the wide ownership dispersion in common law countries results in increased information asymmetry which places heavy demands for accounting disclosure to enhance corporate transparency and enable diverse investors to make informed decisions. This contrasts with civil law countries, where ownership is often restricted to a limited few who have direct access to financial information (La Porta et al., 1997, 1998). From an institutional perspective, Dayanandan et al. (2016) argue that a better quality of information disclosure is more prevalent in common law countries compared to civil law countries, which can be traced to strong adherence to, and strict enforcement of, investor protection laws in these countries.

Two strands of literature are important for reflecting on the relevance of legal origin for accounting disclosure. One perspective stresses that institutional structures differ across different legal regimes, which influences how firms prioritise and respond to information disclosure. In addition, the level of agency problems in countries with varying legal origins creates a need to reduce information asymmetry, especially where investors or debt holders are only privy to information disclosed to them by the firms for decision-making. Accordingly, the difference in legal origins of countries characterises how firms resolve the problem of information asymmetry.

Moreover, various theoretical perspectives from the gender literature regarding risk taking, decision-making, networking, communication, stereotypes, leadership, and so on have been invoked to explain the differences between male and female performance in numerous organisational settings, including corporate governance, external financing, accounting disclosure, and firm performance (Erhardt et al., 2003; Huse and Solberg, 2006; Schubert, 2006; Becker-Blease and Sohl, 2007; Gupta et al., 2014; Kalnins and Williams, 2014; Johnson et al., 2018; Niessen-Ruenzi and Ruenzi, 2019; Fernando et al., 2020; Palvia et al., 2020; Allison et al., 2023; Areneke et al., 2023; Dutta and Mallick, 2023). These studies are underpinned by the notion of gender-based differences in managers leading to different performance outcomes.

There is a great deal of research on the relationship between gender and corporate disclosure, but there

are mixed findings (Post and Byron, 2015). Erhardt et al. (2003) provide evidence to show that gender diversity results in better firm performance. Nalikka (2009) also finds a positive relationship between gender diversity and accounting disclosures. Specifically, their results show that firms with female chief financial officers have a higher rate of disclosure in the firm's annual reports. Other studies, such as Rose (2007) and Carter et al. (2010), argue that there is no relationship between gender and performance. We aim to contribute to this research stream by employing an extended model framework, where we examine the impact of gender, legal origin, and their interaction on a firm's accounting disclosure (see Figure 1). The model illustrates the links between the presence of a female manager, common law legal origin, and accounting disclosure of firms (H1 and H2, respectively), and the impact of a manager's gender combined with legal origin on accounting disclosure (H3). We argue that the impact of gender on a firm's accounting disclosure varies with the legal origin of the countries where firms are located. In explaining accounting disclosure of firms, the direct effects of gender and legal origins have been extensively discussed separately in literature. However, the combined effect of gender and legal origin on corporate accounting disclosure has not received attention. In the rest of this section, we briefly develop and state our hypotheses.

2.2 Gender and accounting disclosure

Gender differences have long been an emotive topic of debate across a range of disciplines and in society at large. As a result, there has also been a stream of research on the role of gender in accounting disclosure (Ho et al., 2015; Khlif and Achek, 2017; Michaelides and Vafeas, 2023). Relatedly, there have been studies on the impact of gender on firm's values (Greene et al., 2020) and qualifying decisions (Carrera and Mareque, 2023), as well as women's preference for non-GAAP accounting disclosure (Ranasinghe et al., 2022) and the effect of female business leadership on ethical governance disclosure (Areneke et al., 2023).

Exploring the reasons for gender differences in auditing and accounting practices, two of the most prominent transmission mechanisms in the existing literature are risk-taking behaviour and overconfidence (Carrera and Mareque, 2023). The overwhelming consensus is that male managers are more prone to risk-taking than their female counterparts. This has a bearing on what might be permissible by female Chief Executive Officers (CEOs) compared to male ones, on whether, or to what extent, there should be accounting disclosure. The second mechanism, overconfidence, relies on the logic that men feel overconfident in finance-related tasks as evidenced in the participation rate of males and females in the finance and accounting industry. The theory here is that female managers are more cautious, attentive to detail, and risk-averse in their professional practice, and thereby, are more prone to accounting disclosure (Ho et al., 2015; Carrera and Mareque, 2023). This hypothesis in the literature is supported by studies on gender differences in corruption, for example (Decarolis et al., 2022; Ranasinghe et al., 2022; Areneke

et al., 2023; Asomah et al., 2023).

In contrast to the theories outlined above, Allison et al. (2023) examine the effect of female senior leadership in 130,000 firms across 130 largely developing economies over the period of 2008 to 2017, finding that female top managers under-perform in relation to their male counterparts. Adopting a multi-theoretical perspective, Allison et al. (2023) build on upper-echelon theory and social role theory, pinpointing that personalities and systematic discrimination may weigh against the performance of female top managers. In a related study, Lemma et al. (2023) compare the performance of female business owners with those of male business owners in South Africa and Kenya, using WBES data from 1,152 firms. This study also found that female business owners under-perform their male counterparts. Similarly, Post and Byron (2015), in a meta-analysis show that firms with women boards under-perform in relation to firms with male boards in countries without gender parity and found no significant difference in performance in countries with gender parity as a policy.

Moreover, Carrera and Mareque (2023) find that the disclosure decision of female accountants may be affected by scope limitation. Similarly, Hossain et al. (2018) examine the association between the auditor's gender and the decision to disclose going concerns for distressed firms in Australia between 2003 and 2011, finding that female auditors are less likely to make this disclosure. The motivation for such non-disclosure could be corruption (Svensson, 2003), psychological and behavioural differences between male and female gender (Allison et al., 2023), country characteristics (Post and Byron, 2015; Lemma et al., 2023), or because male entrepreneurs perform better in new business environments than their female peers (Klapper and Parker, 2011). In view of the above considerations, our first hypothesis is the following.

Hypothesis 1 *Female managers will negatively impact a firm's accounting disclosure.*

2.3 Legal origin and accounting disclosure

Many economic and financial settings that foster innovation, discourage coercion and expropriation, and bolster profitable business transactions have been linked to the existence of strong and enforceable legal codes (Hayek, 1960; North, 1981; La Porta et al., 1997, 1998). For example, Mess (1977) traces the nexus of an accountant's third-party liability (and consequently, accounting disclosure) and the common law tradition to the case of *Ultra-mares Corporation vs. Touche* in 1931 in a ruling made in the New York Court of Appeals in the United States, coupled with the sharp practices that led to the stock market crash of 1929, with the main aim of forestalling fraud, deceit, and negligence on the part of accountants.

Historically, most countries in the world have legal origins that derive either from common law or from civil law. These have spread through most of the world via subjugation, colonisation, or emulation (Glaeser and Shleifer, 2002). There are a number of differences between these two broad forms of legal origin, with the common law tradition known to have less regulation and better governance efficiency

than the civil law origin (Glaeser and Shleifer, 2002). These differences can be crucial to the degree of accounting disclosure in a country. On this question, Hope (2003) examines the role of legal origin and culture in explaining firm-level disclosure data for 42 developed and developing economies, showing that legal origin and culture are positively related to accounting disclosure. In particular, firms in common law countries are shown to be more engaged in accounting disclosure than those in civil law countries.

Dayanandan et al. (2016) combine firm-level data of more than 3,000 firms in 35 countries that have adopted International Financial Reporting Standards (IFRS) with data on legal origins, accounting quality, and disclosure to examine the effect of the adoption of IFRS. Their findings confirm the prevalence of high rates of accounting disclosure by firms in countries with a common law tradition, which is consistent with other studies (Jaggi and Low, 2000; Beck et al., 2003; Armour et al., 2009; Wen et al., 2022). In view of the above considerations, our second hypothesis is as follows.

Hypothesis 2 *Common law tradition will positively impact a firm's accounting disclosure.*

2.4 Gender, legal origin, and accounting disclosure

Given the arguments above, which emphasise the separate relevance of gender and legal origin to accounting disclosure, we next posit that the legal system under which a manager runs a firm is relevant, so that interaction effects may come into play. Liao et al. (2015) study the voluntary disclosure of the 329 largest companies in the UK and find a significant positive relationship between gender diversity and disclosure. The same result is found in Canada and the United States, where various studies show a significant positive relationship between the gender composition of corporate boards and the degree of disclosure in environmental and social (ESG) reporting (Ben-Amar et al., 2017; Lu and Herremans, 2019; Tingbani et al., 2020). Similar outcomes were also found in developing common law countries. For instance, Barako and Brown (2008) observe an increase in women's representation in leadership is correlated with higher disclosure in corporate social reporting by Kenyan banks. Manita et al. (2018) examine the influence of gender on ESG reporting, using data on 379 firms in the United States over a five-year period, finding that there is no significant difference in ESG disclosure, where there are less than three female directors.

However, Khlif and Achek (2017) found empirical evidence that shows that with female representation on boards and in top managerial positions like CFO and CEO there is a leaning towards conservative reporting, less tax aggressiveness, and an increase in audit fees, while also noting a higher degree of social and environmental reporting disclosure. Gupta et al. (2021), in an analysis of public companies across a nine-year period in the United States, also identify a difference in attitude towards reporting disclosure, claiming that where women are represented in leadership of firms there is a positive impact on the disclosure of non-financial performance, but a mixed impact on financial performance disclosure. Chapple and Humphrey (2014) also find a weak negative correlation between gender diversity and firm

performance. Similarly, Wellalage and Locke (2013), in a study of publicly listed companies in Sri Lanka, find a strong negative correlation between gender diversity and firm performance, especially in terms of value and company agency cost. This contrasts with outcomes in other non-common law countries like Italy, where Gordini and Rancati (2017) show an improvement in the financial performance of firms with increased gender diversity, based on an analysis of 918 companies observed over a three-year period.

Based on existing studies, the above discussion indicates that legal origin can influence accounting disclosure. We have also shown, from the existing literature, mixed findings on the relationship between gender and disclosure. The implication is that it is difficult to deduce the link between gender and accounting disclosure, as some studies suggest a positive relationship, some negative, and some find no relationship. In essence, the reconciliation of the disparate findings rests on the differences in context, and thus we consider the important condition of legal origin. Several studies have emphasised the importance and implications of legal origin on accounting and financial systems (La Porta et al., 1997, 1998, 2008; Ball et al., 2000). They argue that common law countries in comparison to civil law countries have better accounting systems, corporate governance, and investor protection (La Porta et al., 1997, 1998, 2008; Djankov et al., 2002, 2003, 2008; Ruland et al., 2007), which are key ingredients to achieving greater accounting disclosure by firms.

Whilst the gender of top managers is an important demographic characteristic for comparing outcomes of financial viability of firms, the disclosure of the financial details of firms is still largely based on the proprietary cost of such disclosures. In addition, cohesive reporting is determined by a country's legal system, so that firms in countries with common law precedent and traditions embedded in their legal systems have strong protections for property rights and contracts (Levine, 2005). This legal framework generally creates a basis for corporate governance practice and environments that encourage a higher degree of disclosure. This mitigates information asymmetry and as a result promotes efficient capital markets (Meek et al., 1995; Michelon and Parbonetti, 2012). In view of the above considerations, our third hypothesis is the following.

Hypothesis 3 *Female managers will negatively impact a firm's accounting disclosure, especially for firms located in countries with a common law tradition.*

3 Research design

3.1 Empirical model

To study the hypothesised relationships between a manager's gender, legal origin, their interaction, and accounting disclosure practices of firm i in country c operating in industry s during year t, we perform

estimations of three different model specifications with linear probability models (LPM).[1] In testing Hypothesis 1, on the impact of the gender of a firm's top manager on its accounting disclosure, we run the following regression model:

$$\begin{aligned} \text{Accounting\_Disclosure} = \alpha &+ \beta\text{Female\_Manager} + \mu_1\text{Firm\_Age} + \mu_2\text{Medium} \\ &+ \mu_3\text{Large} + \mu_4\text{Manager's\_Experience} + \mu_5\text{Foreign} + \mu_6\text{State} \\ &+ \mu_7\text{Subsidiary} + \mu_8\text{Quality\_Recognition} + \mu_9\text{Exporter} \\ &+ \mu_{10}\text{Publicly\_Listed} + \mu_{11}\text{Privately\_Held} + \text{Country\_FEs} \\ &+ \text{Industry\_FEs} + \text{Year\_FEs} + \varepsilon. \end{aligned} \tag{1}$$

In Equation (1), Accounting_Disclosure (the dependent variable) is our measure of a firm's production of audited financial statements (that is, hard financial transparency information), constructed as a dummy variable set equal to 1 for cases when a firm employs external auditors to check and certify its annual financial statements, and 0 otherwise (Kano et al., 2011; Liu et al., 2021). Female_Manager (the main independent variable of interest) is a dummy variable set equal to 1 for cases when a firm is managed by a woman, and 0 if it is managed by a man. Alternatively, we use Female-led_Firms to capture female leadership in a firm, defining it as a dummy variable set equal to 1 if a firm has a female top manager (that is, if Female_Manager = 1) or is majority female-owned (using a minimum 60% threshold), and 0 otherwise.[2] We anticipate that $\beta < 0$ in Equation (1) if Hypothesis 1 is supported.

Our baseline analyses account for a vector of 11 firm-level control variables in line with earlier studies (Carey et al., 2000; Bac, 2001; Megginson and Netter, 2001; Mansi et al., 2004; Beck et al., 2005; Cull and Xu, 2005; Fisman and Svensson, 2007; Estrin et al., 2009; Harrison et al., 2014; Hopkins et al., 2015; Omer et al., 2020; Donovan, 2021; Oyekola et al., 2023a), including Firm_Age, Medium, Large, Manager's_Experience, Foreign, State, Subsidiary, Quality_Recognition, Exporter, Publicly_Listed, and Privately_Held. Specifically, we measure Firm_Age as a dummy variable set equal to 1 if a firm has been in operation for at least 10 years, and 0 otherwise. Medium is a dummy variable set equal to 1 if a firm has 20-99 full-time equivalent employees, and 0 otherwise. Large is a dummy variable set equal to 1 if a firm has 100 or more full-time equivalent employees, and 0 otherwise.[3] Manager's_Experience is a dummy variable set equal to 1 if a firm's manager has acquired at least 10 years of experience in the firm's sector of activities, and 0 otherwise. We measure Foreign with a dummy variable set equal to 1

[1] Although our dependent variable is a binary indicator, we primarily estimate the models specified below using linear probability model/ordinary least squares (LPM/OLS) regressions. This is mainly because one of our interests is in an interaction term (Hypothesis 3), in which marginal effects have been shown to be difficult to interpret in non-linear estimation methods (NEM) by Ai and Norton (2003). See Angrist and Pischke (2009) for the argument on preferring LPM to NEM, especially if one is primarily interested in the marginal effects of covariates. Nevertheless, we have followed Oyekola et al. (2023b) in also presenting (in an Online Appendix) probit and logit estimates for Hypotheses 1 and 2.

[2] This proxy is motivated by prior studies, for example, Anderson and Reeb (2003), Aterido et al. (2011), and Fang et al. (2022), with the 60% female ownership threshold motivated by Dutta and Mallick (2023) and used in Oyekola et al. (2023c).

[3] The reference category is Small, which is defined as a dummy variable set equal to 1 if a firm has 0-19 full-time equivalent employees, and 0 otherwise.

if the percentage of a firm owned by foreign entities is greater than or equal to 50%, and 0 otherwise. State is a dummy variable set equal to 1 if the percentage of a firm owned by the government is greater than or equal to 50%, and 0 otherwise. Subsidiary is a dummy variable set equal to 1 if a firm is part of a larger establishment, and 0 otherwise. Quality_Recognition is a dummy variable set equal to 1 if a firm holds internationally recognised quality certification, and 0 otherwise. Exporter is a dummy variable set equal to 1 if the percentage of a firm's sales that are direct exports is greater than 0%, and 0 otherwise. Publicly_Listed is a dummy variable set equal to 1 if a firm has the legal status of a publicly listed company, and 0 otherwise. Privately_Held is a dummy variable set equal to 1 if a firm has the legal status of a privately held limited liability company, and 0 otherwise.[4]

Previous studies have shown that financial reporting practices of firms differ across countries and across industries (Hope et al., 2011). As a result we include full sets of country and industry fixed effects (Country_FEs and Industry_FEs). These help to account for any time-invariant country- and industry-specific factors. In addition, we control for year fixed effects, Year_FEs, to account for global shocks that impact on firms similarly at the year level, and for trending financial auditing behaviours that may relate to our firm-level measures (Malesky et al., 2020). We also check and confirm that our results are robust with respect to using different combinations of fixed effects, including Country-Year, Industry-Year, and Country-Industry fixed effects, as well as Country-Industry-Year fixed effects. A benefit of these specifications is that it allows us to control for time-varying (albeit sometimes very slowly) unobserved country and industry heterogeneities, including culture, economic development, and institutional environment (Berman and Héricourt, 2010; Hope et al., 2011; Gauthier et al., 2021). The error is designated by ε, which we cluster at the firm level (Petersen, 2008; Cameron et al., 2011), and we confirm that our results hold when we apply country-industry- and country-level clustering of standard errors, as well as firm-year double clustering (Cameron and Miller, 2015).

In testing Hypothesis 2, on the impact of national legal origin on accounting disclosure, we run the following regression model:

$$\begin{aligned} \text{Accounting\_Disclosure} = \alpha &+ \gamma \text{Common\_Law} + \mu_1 \text{Firm\_Age} + \mu_2 \text{Medium} \\ &+ \mu_3 \text{Large} + \mu_4 \text{Manager's\_Experience} + \mu_5 \text{Foreign} + \mu_6 \text{State} \\ &+ \mu_7 \text{Subsidiary} + \mu_8 \text{Quality\_Recognition} + \mu_9 \text{Exporter} \\ &+ \mu_{10} \text{Publicly\_Listed} + \mu_{11} \text{Privately\_Held} + \text{Region\_FEs} \\ &+ \text{Industry\_FEs} + \text{Year\_FEs} + \varepsilon. \end{aligned} \tag{2}$$

In Equation (2), Common_Law (the main independent variable of interest) reflects a broad categorisation of legal traditions around the world, defined as a dummy variable set equal to 1 for cases when

[4]The reference category is Other_Legal_Status, which is a dummy variable set equal to 1 if a firm has the legal status of either sole proprietorship, partnership, limited partnership, or any other, and 0 otherwise.

the country where a firm is located has an English common law basis (British legal origin), and 0 for civil law countries (La Porta et al., 1997, 1998; Anderson, 2018). We anticipate that $\gamma > 0$ in Equation (2) if Hypothesis 2 is supported. As the legal systems of countries grouped under the civil law heritage, including French civil origin, German civil origin, Scandinavian civil origin, and Socialist civil origin, may exhibit important underlying differences, we follow Djankov et al. (2008), La Porta et al. (2008), Spamann (2010), and Liang and Renneboog (2017) in a robustness test to delineate legal origins of countries in our sample into five categories, with the English common law now serving as the reference category. Meanwhile, given that our main independent variable here is time-invariant, the above model is estimated without country fixed effects, incorporating region fixed effects (Region_FEs) instead.

In testing Hypothesis 3, on how the gender of a firm's top manager interacts with the legal regime of a country in explaining accounting disclosure of a firm, we run the following regression model:

$$\begin{aligned} \text{Accounting\_Disclosure} = \alpha &+ \beta\text{Female\_Manager} + \gamma\text{Common\_Law} + \delta\text{Female\_Manager} \\ &\times \text{Common\_Law} + \mu_1\text{Firm\_Age} + \mu_2\text{Medium} + \mu_3\text{Large} \\ &+ \mu_4\text{Manager's\_Experience} + \mu_5\text{Foreign} + \mu_6\text{State} + \mu_7\text{Subsidiary} \\ &+ \mu_8\text{Quality\_Recognition} + \mu_9\text{Exporter} + \mu_{10}\text{Publicly\_Listed} \\ &+ \mu_{11}\text{Privately\_Held} + \text{Region\_FEs} + \text{Industry\_FEs} + \text{Year\_FEs} + \varepsilon. \end{aligned} \tag{3}$$

We anticipate that $\delta < 0$ in Equation (3) if Hypothesis 3 is supported. In both Equations (2) and (3), all variables are as defined following Equation (1).[5] In our analyses of Equations (1)-(3), the identification assumption is that, after we have controlled for firm-level characteristics, country, industry, and year fixed effects (or any of their interacting pairs), the relations between accounting disclosure and female top manager, English common law, and/or their interaction term reflect the significance of each of the variables of interest for a firm's decision to produce, or not produce, audited financial statements.

3.2 Sample selection and distribution

Table 1 summarises our sample selection procedures. We retrieve our firm-level data covering the period 2006–2022 from the database of the Enterprise Surveys (ES) published by the World Bank (WB).[6] We start with the full sample released in February 2023, which includes observations on 191,862 unique firms in 154 countries from different geographic regions of the world. After restricting the sample to firms with usable data on audited financial statements (variable k21), we are left with 187,002 observations. This variable is important because we require it to construct our outcome variable of interest, Accounting_Disclosure. We then remove firms with missing data on the gender of a firm's top manager

[5] See Table A1 in the Online Appendix for details of these variables and their sources, as well as the description of all other variables used for subsequent analysis.

[6] World Bank Enterprise Surveys (WBES): `http://www.enterprisesurveys.org`.

(variable b7a, which we need to compute our primary firm-level independent variable, Female_Manager), yielding 158,574 firms in 148 countries. Next, we delete observations with missing values for our main firm-level control variables described above,[7] leaving us with observations on 145,228 unique firms from 147 countries, covering survey years 2008–2022.[8] Panel A of Figure 2 shows the distribution of the number of firms for each country in our sample on a world map. The firms are grouped into four categories with darker shading denoting countries with a larger number of firms. As illustrated in Figure 2 fewer firms are covered, on average, per African country compared to other parts of the world, for example, Latin America and the Caribbean.

As previously discussed, our paper seeks to understand the potential effects that managing business ventures under different legal regimes may have on whether firms, especially female-managed ones, choose to audit their financial accounts. As a result of this, our final filtering procedure is to obtain the baseline analysis sample by matching the legal origin data from La Porta et al. (1997, 1998, 2008) with the WBES firm-level data at the country level. This step leaves a sample of 140,860 firms located in 139 countries.[9] Panel B of Figure 2 shows the distribution of legal heritage of countries in our sample on a world map, with darker shading denoting English common law origin. Comparing the maps in the two panels of Figure 2, we observe that, in our sample, civil law countries have had more of their firms surveyed.

By converting the information used to plot the distribution in panel B of Figure 2 into numbers in Table 2, we are able to view the distribution of countries and firms by legal regimes around the world. Broadly speaking, 27.60% of the firms in the sample are located in an English common law country, of which we have 41 countries represented in our study, with the remaining 101,989 firms coming from the 98 civil law countries in our sample (see Figure A1 in the Online Appendix). Digging deeper into the civil law legal origin of countries by splitting into its four subgroups, we can see that French civil law (with 54,365 firms from 62 countries) and Socialist civil law (with 42,684 firms from 31 countries) have the largest representations of countries and firms. German civil law (being used in Austria and Germany) and Scandinavian civil law (operating in Denmark, Finland, and Sweden), with 2,194 and 2,746 firms, respectively, complete our sample.

Table 2 also shows the distribution of firms, within each of the five subgroups of legal origin, that have audited financial statements prepared and those with female top managers. As can be seen from the penultimate column, firms under the Scandinavian civil law regime have the highest accounting disclosure rates (97.45%), whilst firms in the Socialist civil law system have the lowest disclosure rates (36.43%). For English common law, French civil law, and German civil law traditions, the accounting disclosure rates of their firms are 62.77%, 56.44%, and 59.53%, respectively. Collectively, however, firms from the

[7] See Table A1 in the Online Appendix for detailed WBES variable nomenclature for these firm-level control variables.

[8] We note that WBES data are not firm-level panel data. Hence, the 2008–2022 period refers mainly to the survey years covered in our study, with each firm in our final sample representing a unique data point, regardless of whether a country has been surveyed more than once over the sample period.

[9] Additional analyses implemented later will necessitate the introduction of more control variables, which may further reduce the number of observations available for use in the corresponding regression specifications.

English common law countries have higher accounting disclosure rates than all civil law countries (see also panel A of Figure A1). In the final column of Table 2, we see that the share of firms with female top manager in our sample is lowest under the Scandinavian civil law legal origin (8.70%) and highest under Socialist civil law (21.19%). Again, there are more firms with female top managers, on average, in the English common law countries than in all civil law countries (see panel B of Figure A1).

Finally, Figure 3 provides additional graphical illustrations of the distribution of firms in our sample over time (panel A). We find that there seems to be no systematic pattern to the number of firms surveyed yearly in the WBES, though it is easy to observe the possible impact of global crises (for example, the COVID-19 pandemic) on the World Bank's data-gathering efforts.[10] Panel B of Figure 3 illustrates the evolution of the regional distribution of firms included in our analysis. For each year, it shows the share of firms that are surveyed in each region of the world: Sub-Saharan Africa (SSA), East Asia and the Pacific (EAP), Europe and Central Asia (ECA), Latin America and the Caribbean (LAC), Middle-East and North Africa (MNA), and South Asia (SAR). The evidence suggests that there is no obvious overly represented region at yearly frequencies. We then repeat this exercise focusing on sectors (manufacturing or service) in panel C of Figure 3. As shown, the sectoral distribution demonstrates that a slightly higher percentage of firms in our sample are from the manufacturing sector.

3.3 Descriptive statistics and correlations

Table 3 reports the descriptive statistics for variables employed in our benchmark regressions, including the mean, median, standard deviation, minimum, and maximum for the aggregate sample and comparisons of the means of these variables across gender of top manager and legal origins of countries (the descriptive statistics for all other variables used in our analysis are contained in Table A2 of the Online Appendix). In terms of the aggregate sample in panel A of Table 3, the average values of our outcome variable, Accounting_Disclosure, and main independent variable, Female_Manager, are 0.530 and 0.151, respectively. Figure 4 shows the distribution of accounting disclosure (panel A) and female top managers (panel B) for firms in our sample on world maps, with darker shading indicating higher values in both panels. It is evident that both variables display large cross-country variations. As mentioned above, 27.60% of the firms in our sample are located in one of the 41 common law countries.

Regarding our benchmark firm-level control variables, the share of firm age (Firm_Age) greater than or equal to 10 years in the aggregate sample is 75%, while the share of a firm manager's experience (Manager's_Experience) that is greater than or equal to 10 years in the firm's sector of business is 79.1%. We observe that many firms in our sample are either small- (Small) or medium-sized (Medium) at 45.1% and 34.6%, respectively, with large-sized (Large) firms comprising the rest of the sample. Concerning the

[10] In the Online Appendix, Figure A2 illustrates further the yearly distribution split into firms with audited versus non-audited financial statements in panel A, female- versus male-managed firms in panel B, and firms in civil law versus common law countries in panel C.

ownership status of firms, we find that, on average, 6.8% of the sampled firms are owned by foreigners (Foreign) and 0.60% of firms are owned, on average, by national governments (State). As shown, 17.2% of firms are parts of a larger establishment (Subsidiaries), while 25.2% of the firms in our sample possess at least one international certificate of quality recognition (Quality_Recognition). The firms in our sample sell mostly in the domestic market, with an average export share of their outputs at 19.2%. On legal status, the descriptive evidence indicates that 5.4% and 41.2% of firms in our aggregate sample are publicly listed (Publicly_Listed) and privately held (Privately_Held), respectively, with the remaining fraction comprising other legal configurations.

Panel B of Table 3 presents the descriptive statistics for the variables split by gender of top manager (columns (7)-(9)) and legal origins of countries (columns (10)-(12)). It is evident from these univariate statistics that the distinctions arising because of a firm manager's gender and legal systems of countries are highly statistically significant, with p-value < 0.0001 in all cases except for State in the case of female-male manager difference.[11] For instance, Table 3 shows that, on average, female-managed firms are typically younger, smaller, and are more likely to have managers with lower sectoral experience compared to male-managed firms. Male-managed firms tend to be more connected, receiving higher investments from abroad, being more integrated with bigger establishments, possessing greater international quality recognition, and exporting more. Importantly, and perhaps due to some of these firm-level heterogeneities and differences in the legal regimes under which the firms in the sample are operating, female-managed firms have lower audited financial statements (Accounting_Disclosure) than their male-managed counterparts (0.451 versus 0.544), but accounting disclosure is higher under common law origin relative to collective civil law origin (0.628 versus 0.492), suggestive of preliminary support for Hypotheses 1 and 2.

Table 4 presents the bivariate correlations amongst our variables of most interest. As shown, the magnitudes of the pairwise correlation coefficients between all the variables are generally low to moderate (ranging from -0.367 to 0.368), especially the correlation between our two primary independent variables, Female_Manager and Common_Law (-0.043), so all are significantly below the generally recommended threshold of 0.8. These values provide a first evidence that multicollinearity is not likely to be a problem in our analyses. As a second approach, we calculate the Variance Inflation Factors (VIF) for our benchmark regressions in Section 4. The corresponding maximum VIF for the full benchmark specifications in Tables 5, 6, and 7 are 5.89, 5.77, and 5.71, respectively, which are all below the recommended threshold of 10 (Neter et al., 1996; O'Brien, 2007). These tests confirm that our data sets are appropriate for this empirical investigation.

[11] We have further applied a non-parametric test, the Wilcoxon rank-sum (Mann-Whitney) U test, to compare the differences between variables of interest by gender of top manager and across the legal origins of countries. The p-values from both the t-tests and Mann-Whitney tests reported in Table A3 of the Online Appendix confirm the existence of systematic differences in all variables, which are all significant at the 1% level, except for State when comparing between female- and male-managed firms.

4 Benchmark results

In this section, we provide systematic empirical evidence for the effects of the gender of a firm's top manager, legal origin of countries firms are located in, and their interaction on a firm's accounting disclosure behaviours. Table 5 presents the results obtained by estimating Equation (1) for the impact of Female_Manager on Accounting_Disclosure to test Hypothesis 1. Table 6 presents the results obtained by estimating Equation (2) for the impact of Common_Law on Accounting_Disclosure to test Hypothesis 2. Table 7 presents the results obtained by estimating Equation (3) for the impact of Female_Manager combined with Common_Law on Accounting_Disclosure to test Hypothesis 3.

4.1 Effect of gender on accounting disclosure

In the estimated results for Equation (1), column (1) of Table 5 presents the parameter estimate on the main independent variable, Female_Manager, including only country, industry, and year fixed effects separately (which is our most basic specification). We note that a qualitatively similar result is obtained when fixed effects are excluded. The specification in column (2), representing our benchmark specification for testing Hypothesis 1, adds the firm-level control variables discussed above. As can be seen in the two columns, the parameters on Female_Manager have the expected negative sign ($\beta = -0.0363$ in column (1) and $\beta = -0.0142$ in column (2)) and are significant (with p-value < 0.000 in both cases), suggesting that the typical firm in our sample with a female top manager has a greater probability of not producing audited financial statements. These findings, which strongly support Hypothesis 1, are not only statistically important, but are also economically meaningful. For instance, the parameter estimate in column (2) for Female_Manager implies that, all else of our variables being equal, the probability of female-managed firms producing externally audited financial statements is 1.42 percentage points (or 0.03 standard deviation) lower than their male-managed counterparts.

We provide additional empirical support for Hypothesis 1 by applying alternative regression model specifications in columns (3)–(5) of Table 5. More specifically, we introduce interacted pairwise fixed effects for Country-Year and Industry-Year in column (3), Country-Year, Industry-Year, and Country-Industry in column (4), and a triple interacted fixed effect of Country-Industry-Year in column (5). As previously mentioned, including these extended fixed effects implies that we can compare accounting disclosure practices of firms operating in the same industry within a given country, while controlling for time-varying characteristics. In all these specifications (that is, the benchmark and the extensions), we realise that the estimated parameters on Female_Manager continue to be negative and significant, suggesting a robust inverse relationship between female-managed firms and the probability of producing externally audited financial statements.

The parameter estimates on the control variables are all positive and significant, suggesting that

older, larger, foreign, state-owned, and exporting firms have a greater probability of producing audited financial statements. Likewise, firms whose managers have longer sector-specific experience and that are part of a larger establishment, have international quality recognition, are publicly listed, and are privately held are more likely to have hired external auditors to prepare their financial statements. The findings regarding the control variables are plausible and are consistent with prior contributions to the literature, as detailed in Section 2.

4.2 Effect of legal origin on accounting disclosure

In Table 6, we test Hypothesis 2 using Equation (2). The specification in column (1) presents the parameter estimate on the main independent variable, Common_Law, including only industry and year fixed effects individually. We have not included country fixed effects because legal origin indicators are time-invariant by nature. In column (2), we add firm-level control variables. As shown, the parameter estimates in both columns (1) and (2) are positive and statistically significant ($\gamma = 0.1043$, p-value < 0.000; $\gamma = 0.1049$, p-value < 0.000). In column (3), which contains our benchmark specification for testing Hypothesis 2, we control for firm-level variables and region, industry, and year fixed effects, finding that the coefficient on Common_Law retains the predicted positive sign ($\gamma = 0.07$) and is statistically significant (p-value < 0.000), indicating that the typical firm in our sample that is located in countries with English common law legal origin has a greater probability of producing audited financial statements (that is, has better accounting disclosure practices). More specifically, the estimated parameter in column (3) implies that, all else being equal, the probability of producing externally audited financial statements by firms in the English common law legal origin countries is 7 percentage points (or 0.14 standard deviation) higher than it is for firms located in the civil law legal origin countries.

As a first check of the robustness of the results related to Hypothesis 2, we again employ alternative regression model specifications in columns (4)–(5) of Table 6. To this end, we introduce interacted pairwise fixed effects for Region-Year and Industry-Year in column (4) and Region-Industry-Year in column (5). The parameter estimates for Common_Law remain positive, as expected, and statistically significant with respect to these two additional specifications, suggesting a robust positive influence of English common law legal origin on the probability of firms producing externally audited financial statements ($\gamma = 0.1426$, p-value < 0.000; $\gamma = 0.1453$, p-value < 0.000). Thus, Hypothesis 2 is strongly supported.

4.3 Effect of interacted gender and legal origin on accounting disclosure

Table 7 presents tests of Hypothesis 3 that the negative association between female-managed firms and the preparation of externally audited financial statements is more pronounced in countries with English common law legal tradition. In the specification in column (1), we include both Female_Manager and

Common_Law, along with industry and year fixed effects separately. The second specification shown in column (2) adds region fixed effects, also individually. The two regression models used in columns (1) and (2) of Table 7 allow us to examine the direct effects of our two main explanatory variables, when jointly accounted for, on Accounting_Disclosure. In our findings ($\beta = -0.0662$ and $\gamma = 0.1055$ in column (1); $\beta = -0.0496$ and $\gamma = 0.0783$ in column (2)) consistent with column (6) in Table 5, the parameter estimate on Female_Manager (Common_Law) is still negative (positive, respectively) and highly significant (with a p-value < 0.000 in the two specifications).

In column (3), where the main variable of interest to us is the interaction of the gender of a firm's top manager with the legal origin of a country (Female_Manager $\times$ Common_Law), we begin our test of Hypothesis 3. Controlling for only industry and year fixed effects, we obtain a negative and significant interaction parameter ($\delta = -0.0154$, p-value=0.045). The specification in column (4) includes our firm-level control variables. As before, we realise that the interaction parameter between female manager and common law is negative and significant ($\delta = -0.0608$, p-value<0.000). Finally, we include regional fixed effects in the specification in column (5), which represents our benchmark model for testing Hypothesis 3. Here we find that the interaction parameter on Female_Manager $\times$ Common_Law remains significant and maintains its negative sign ($\delta = -0.0565$, p-value<0.000). Importantly, this result implies that the ability of female-managed firms in our sample to report audited financial statements is considerably impacted by the legal regime of countries where they are domiciled. Put differently, the probable influence of female managers in lowering the propensity of their firms to hire external auditors in order to check and certify their financial accounts is exacerbated when the female-managed firms are located in an English common law country.

Similar to the approaches employed in Tables 5 and 6, we subject our results concerning Hypothesis 3 to specification tests, where we utilise interacted pairwise fixed effects for Region-Year and Industry-Year, and Region-Industry-Year, instead of region, industry, and year fixed effects entering separately. Although these results are unreported for the sake of brevity, we find that strong negative interaction effects exist in both specifications. Hypothesis 3 is thus strongly supported.

5 Robustness checks

In this section, we check the robustness of our results by implementing several other estimations, including (1) addressing endogeneity; (2) accounting for additional control variables; (3) employing alternative estimation techniques; (4) using alternative proxies for key variables; and (5) applying different sub-samples to re-test our hypotheses. These exercises are grouped under two sub-sections below. We present the results of the first group (addressing endogeneity) in the main text. However, all the results related to the second group (further analyses) are presented in the Online Appendix to save space.

5.1 Addressing endogeneity

Here, we focus on the potential endogeneity concerns when investigating the relationship between the gender of top managers and the decision to hire external auditors to prepare financial statements (Hypothesis 1). This is an established problem in related studies on gendered effects and those employing firm-level data (Svensson, 2003; Fisman and Svensson, 2007; Terjesen and Singh, 2008; Aterido et al., 2011; Hope et al., 2011; Flabbi et al., 2019; Wellalage et al., 2020; Allison et al., 2023; Dutta and Mallick, 2023; Oyekola et al., 2023c). In our case, it is easy to imagine scenarios where selection bias may be driving our benchmark results because of the possible non-random appointment of female top managers by firms in our sample. For example: (1) a firm might have unobservable characteristics that are not randomly assigned between female- and male-managed firms, which shape both the choice to employ a female manager and the decision to produce externally certified financial statements; and (2) a manager might have some unobservable characteristics that may be different across gender, such that a competent female manager may self-select into certain types of firms (Amore et al., 2014; Flabbi et al., 2019; Allison et al., 2023; Dutta and Mallick, 2023).

To ensure that our measure of female top manager is indeed capturing the effects of gender and not these unobserved differences, we have implemented several specification tests to mitigate the potential bias. Although the endogeneity of the female manager parameter mainly concerns Hypothesis 1 (and, to a lesser degree, Hypothesis 3), we introduce the following interacted pair fixed effects in presenting the benchmark results in Section 4 for all three hypotheses: (1) Country-Year and Industry-Year; (2) Country-Year, Industry-Year, and Country-Industry; and (3) Country-Industry-Year. This is carried out for Hypothesis 1 to account for omitted variables. For Hypotheses 2 and 3, we have done similarly, replacing country fixed effects with region fixed effects as legal origin do not vary at the country level. As reported in Tables 5-7, the effects of all the variables of interest for accounting disclosure remain similar to the benchmark findings. In the rest of this sub-section, we further attempt to address the potential endogeneity of the female manager parameter by: (1) instrumenting for female top manager and performing instrumental variable (IV) regression analysis; and (2) employing propensity score matching (PSM) analysis.

5.1.1 IV analysis

The IV method is particularly useful in this case, where endogeneity is likely to be due to measurement error and simultaneity bias (Wellalage et al., 2020; Bazel-Shoham et al., 2023; Dutta and Mallick, 2023). Following existing approaches to firm-level empirical studies (Fisman and Svensson, 2007; Gauthier et al., 2021; Liu et al., 2021; Bazel-Shoham et al., 2023), we construct average female top managers at the country-industry-year level (Female_Manager_Ciy) and use it as an instrument for Female_Manager. The logic behind this instrument is that a firm's exposure to a business environment with a greater

probability of appointing a female manager will positively affect its likelihood of doing so, without directly affecting its decision to hire an external auditor.

In the IV procedure, we re-estimate Equations (1) and (3) for Hypotheses 1 and 3, respectively. More specifically, we re-run Equation (1) by substituting out Accounting_Disclosure from the left-hand-side using Female_Manager and adding Female_Manager_Ciy to the right-hand-side in the first stage regression. The result, which confirms the validity of the instrument, is presented in column (1) of Table 8. As shown, Female_Manager_Ciy is positively associated with Female_Manager (0.9919) and highly significant (p-value < 0.000). The second stage results, where we now employ the predicted value of female top manager in the right-hand-side of Equation (1), are shown in column (4), revealing that the parameter estimate on Female_Manager remains negative and statistically significant as in the benchmark results. Moreover, one may argue for the case of endogeneity in Hypothesis 3 because a plausibly exogenous variable, Common_Law, is interacted with a potentially endogenous one, Female_Manager. Hence we have employed the interacted variable Female_Manager_Ciy × Common_Law to instrument for Female_Manager × Common_Law in a robustness test for Hypothesis 3. The corresponding first stage results for applying the IV method to Equation (3) are reported in columns (2) and (3), with the second stage result presented in column (5). Again, the estimated parameter for Female_Manager × Common_Law remains negative and statistically significant as in the benchmark results.

5.1.2 PSM analysis

We next follow the insight offered by Larcker and Rusticus (2010) to explore, whenever it is feasible, alternative research designs to resolve endogeneity issues by adopting a PSM approach (Rosenbaum and Rubin, 1983, 1984; Heckman et al., 1998; Smith and Todd, 2001; Dehejia and Wahba, 2002; Abadie and Imbens, 2016) to re-test all three hypotheses. Given the potential concern that female-managed firms in our sample may differ in some meaningful aspects from the male-managed ones, using PSM may be particularly helpful in matching treated (that is, firms with female top managers) and control (firms with male top managers) groups based on a set of observable characteristics (Abadie and Imbens, 2011) and the imposition of a common support (Imbens and Wooldridge, 2009), thereby mitigating sample selection bias.

More specifically, we first compute propensity scores by performing a logistic regression, where Female_Manager, our outcome variable of interest, is equal to one if a firm is in the treated group or is zero if the firm is in the control group. As explanatory variables in the logistic model specification, we consider the firm-level controls used in the benchmark model. Having estimated the model, we obtain the predicted propensity score (that is, the conditional probability) of a firm being female-managed.[12] In the second step, we estimate weighted regressions on the matched sample, with replacement, based on

[12]Figure A3 in the Online Appendix shows that there is considerable overlap in the estimated propensity scores for treated and control groups, which is essential for drawing inferences (Wooldridge, 2010).

the estimated propensity score, where the weights are calculated using five different matching methodologies (Caliendo and Kopeinig, 2008; Galeotti et al., 2021; Gauthier et al., 2021; Sehrish et al., 2023). The results are presented in Table 9, with panels A, B, and C, focusing on Hypotheses 1, 2, and 3, respectively.[13] As shown, the results are similar to the benchmark ones, providing additional support for our hypotheses. Importantly, the estimated effects from the PSM approach indicate that our findings are not sensitive to observable differences between female-and male-managed firms.

5.2 Further analyses

5.2.1 Accounting for additional controls

As mentioned above, we have followed previous studies (Hope et al., 2011; Qi and Nguyen, 2021; Liu et al., 2021; Oyekola et al., 2023b) in employing different model specifications in our benchmark results in order to control for both unobserved and time-varying country heterogeneities by including country and interacted country-year fixed effects, amongst others. In the robustness analysis that is conducted next, we follow a different approach by augmenting Equations (1)–(3) with $g(\mathrm{A})$, where A is a vector of country-level control variables, depicting macroeconomic conditions, institutional environment, and culture (see, for example, Greif (1994); Stulz and Williamson (2003); Guiso et al. (2006); Doidge et al. (2007); Guiso et al. (2009); Hilary and Hui (2009); Kumar et al. (2011); El Ghoul and Zheng (2016); Gorodnichenko and Roland (2017); Liang and Renneboog (2017); Cumming et al. (2019); Krammer (2019); Liu et al. (2021)).

More specifically, we capture a country's macroeconomic environment using national income per capita, growth rate of national income, inflation, and a proxy for education level. We then employ the widely-used governance measures from Worldwide Governance Indicators; the six indicators are control of corruption, government effectiveness, political stability, rule of law, regulatory quality, and voice and accountability. We note that all time-varying country-level controls are lagged by one year to remove contemporaneous bias. Table A1 in the Online Appendix gives definitions for all additional control variables. We show the results in the Online Appendix Table A5. As shown, including all these controls has not removed the explanatory powers of our main independent variables, and the parameters continue to hold similar signs and significance levels. Once again Hypotheses 1–3 remain supported.

Furthermore, we investigate the influence of religion and culture by including proxies for them in another set of regressions (untabulated). Specifically, we capture Weber's thesis (Weber, 1930) on the work and social ethics of Protestantism[14] and control for Hofstede's six cultural dimensions: power distance, individualism, masculinity, uncertainty avoidance, long-term orientation, and indulgence (Hofstede, 1980, 2001; Hofstede et al., 2010). In running the regression specifications involving these country-level con-

[13] In the Online Appendix, Table A4 presents an assessment of the matching quality and Figure A4 depicts the degree of covariate imbalance using standardised percentage bias before and after matching.

[14] We also consider a specification that controls for the share of a population belonging to majority religions.

trols that are time-invariant in nature, country fixed effects are excluded, being replaced by region fixed effects. Again, the results are similar to the benchmark findings, particularly for Hypotheses 1 and 3. However, the findings are mixed on Hypothesis 2, when religion and culture are introduced. More specifically, we find that Hypothesis 2 is supported when religion measures are controlled for whereas this is not the case when cultural dimensions are added, leaving Common_Law either insignificant or with its parameter turning negative and significant.

5.2.2 Running alternative estimation techniques

In our benchmark analyses, we perform the estimations of Equations (1)–(3) by applying the LPM/OLS regression technique, mainly because of the ease of interpretation of interaction effects in non-linear methods (Probit or Logit, for example). Nonetheless, given the binary nature of our dependent variable, we next implement these alternative estimation methods. Specifically, we re-estimate the models in Equations (1)–(3) using a Probit model and present the results in Table A6 of the Online Appendix. As shown, the results are extremely analogous to our benchmark ones, which shows that our results are not driven by the choice of estimation method. We have also executed a Logit model specification (untabulated), finding parallel results to the benchmark ones.

5.2.3 Using alternative proxies for key variables

Our next robustness test involves checking whether our benchmark results on the relation between gender of top manager, legal origins, their interaction, and accounting disclosure behaviours of firms around the world are sensitive to how we have measured the main independent variables of interest. More specifically, we implement our full benchmark econometric framework for our three hypotheses from Tables 5–7 and consider an alternative definition of female top manager, Female-led_Firms, and a more disaggregated coding of legal origins of countries, where we use French civil origin, German civil origin, Scandinavian civil origin, and Socialist civil origin (Djankov et al., 2008; La Porta et al., 2008; Spamann, 2010; Liang and Renneboog, 2017) instead of English common law (which now serves as the reference category).

We show the results in the Online Appendix Table A7. It is immediately clear from the findings in column (1) of Table A7 that Hypothesis 1 remains virtually unaffected, and we continue to observe a negative and statistically significant relation between the gender of top manager in a firm within our sample and accounting disclosure practices. In column (2), we test Hypothesis 2 using the alternative codification of legal origins. As might be expected, the parameters on the majority of the individual civil law types (French civil law, German civil law, and Socialist civil law regimes) are all significant and bear opposite signs to English common law, except for the Scandinavian civil law system, whose parameter estimate is significantly positive. Overall, these results support Hypothesis 1 and are consistent with the conjecture that individual civil law systems may produce effects that are dissimilar to the composite

indicator. The remaining three columns re-test Hypothesis 3 using Female-led_Firms and the benchmark measure of legal origin, Common_Law, in column (3), Female_Manager and alternative measures of legal origin in column (4), and the combination of both alternative measures of interest in column (5). As shown, the results are largely in line with the benchmark findings.

5.2.4 Implementing sub-sample regressions

Finally, we implement sub-sample analysis and deal with potential outliers. Specifically, we re-estimate Equations (1)–(3) and carry out the following tasks: (1) we focus on a sample of firms with largely truthful responses as determined by the survey contractors; (2) we focus on a sample of firms that are registered; and (3) we focus on samples that comprise firms located in each of the following geographical region: Sub-Saharan Africa (SSA), East Asia and the Pacific (EAP), Europe and Central Asia (ECA), Latin America and the Caribbean (LAC), Middle-East and North Africa (MNA), and South Asia (SAR). We present the results in the Online Appendix Table A8. The findings from tasks (1) and (2) are straightforward confirmations of the results previously reported in the benchmark analyses for all three hypotheses.

Meanwhile, the results vary by region in task (3), as one might expect. As shown, Hypothesis 1, on the negative Female_Manager-Accounting_Disclosure nexus, is confirmed for EAP and ECA but is reversed for MNA and SAR, turning positive and significant. Moreover, the link between female top managers and accounting disclosure practices of firms is insignificant for firms in SSA and LAC. The results of Hypothesis 2, on the positive Common_Law-Accounting_Disclosure nexus, are confirmed for all regions, except for EAP. Lastly, Hypothesis 3, on the interacted effects of female managers and English common law on accounting disclosure, is only confirmed for EAP, but not in the other regions. These findings underscore the importance of controlling for regional fixed effects in our model specification.

Regarding excluding potential outliers, we employ robust regressions using the "rreg" command in Stata 17. This method excludes atypical observations when Cook's distance is greater than 1, executes Huber iterations, and attaches lower weights to observations with large absolute residuals. The results from this exercise (untabulated) are virtually equivalent to the benchmark findings.

6 Conclusions

In this paper, we propose and test the following three hypotheses that state, when all other relevant variables are held equal: (1) having a female manager is negatively related to a firm's accounting disclosure; (2) being located in an English common law origin country is positively related to a firm's accounting disclosure; and (3) the negative impact of having a female manager on a firm's accounting disclosure is exacerbated when the firm is located in a country with an English common law tradition. The existing literature affirms that a firm's accounting disclose practices largely depend on the regulatory systems of

their geographical location, and to some extent on the demographics of their top management, including gender. The general consensus is that accounting disclosure behaviours of firms around the world are the products of legal systems transplanted by colonising Western nations. These legal traditions, which have come to be known as the common law (emanating from England) and the civil law (with sub-traditions of French, German, Scandinavian, and Socialist), along with evolving international financial and accounting reporting practices are accepted to play important roles in whether, when, and how firms prepare their financial statements.

Notably, the findings in the literature addressing the relationship between the gender of a firm's top management or the legal origins of countries the firms operate in and accounting disclosure have solely focused on one of these factors at a time and not both simultaneously, despite the increased growth of females in firms' senior leadership. Responding to the need to bridge this gap in the literature, our paper offers the first firm-level evidence on the importance of the gender of top managers, the legal origin of countries firms are located in, and their interaction in affecting a firm's decision to report externally generated audited financial statements, thereby fulfilling the requests for further research on the impact of various decision-making practices, performance, and ethics by female top managers (Bertrand and Schoar, 2003; Adams and Funk, 2012; Faccio et al., 2016; Snellman and Solal, 2023).

Using a large international sample of 140,860 firms located in 139 countries, spanning a period of 14 years (2008–2022) of WBES data, we establish strong support for our three hypotheses. More specifically and in relation to our first hypothesis, we find that firms led by female managers have a higher likelihood of not producing audited financial reports in comparison to firms managed by males, with an estimated 1.42 percentage points (or 0.03 standard deviation) difference. Although we are unable to completely address this because of the nature of our data, there appears to be a suggestion that this result may be influenced by firm heterogeneities. For instance, we find that, regardless of top management's gender, firms with top managers who have at least a decade of sector-specific experience coupled with international quality recognition, are large, and are either foreign or government-owned are more inclined to have their financial statements prepared by external auditors.

In terms of our second hypothesis, our results show that firms that operate in English common law regime countries have higher accounting disclosure rates than their peers based in countries dominated by civil law heritage, with an estimated 7 percentage points (or 0.14 standard deviation) difference. Whilst our univariate tests show that the account reporting practices of firms located in English legal system countries are more transparent than firms operating in civil law jurisdictions, complementing the findings by Janahi et al. (2021), but contrary to those of Armour et al. (2009), the results on our third hypothesis is that the probability of female-managed firms not producing audited financial statements is more pronounced in English common law heritage countries. By addressing the interacted influence (Hypothesis 3), our paper highlights the importance of empirically considering the interaction

between gender and legal systems of countries as determinants of firm accounting disclosure patterns. This improves on work in the literature showing that the top manager's gender or the legal traditions of countries influence the extent to which firms disclose professionally vetted financial statements.

Our results have several important implications for different stakeholders: investors, management, and policy makers. For investors, our empirical evidence highlights the primacy of the legal systems, where firms in English common law countries are associated with higher accounting disclosure practices than their counterparts in civil law countries. The likelihood of non-disclosure rises when such firms are managed by females. Consequently, international investors and businesses should take account of both the gender of management and the legal regimes of countries in their decision-making process.

Our findings also have managerial implications as they relate to the performance of females in corporate leadership in particular, and top management diversity in general. Whilst many studies have reported a positive association between female top managers and financial reporting (Ho et al., 2015; Ranasinghe et al., 2022; Carrera and Mareque, 2023), we find the opposite to be true. Therefore, even though gender diversity brings a wide range of perspectives and resources to a firm's top management, we underscore that increased gender diversity should be internally firm-driven and not necessarily externally, legally, mandated by national governments. Otherwise, increased imposition of female top managers and forced increase in board gender mix could potentially result in more negative effects as observed in some European civil law countries (Adams and Kirchmaier, 2016; Lara et al., 2022), which could lead to unintended long-lasting detrimental effects for efforts to combat gender biases.

Regarding policy implications, our results offer evidence for governments in both common and civil law origin countries, especially in relation to regulations for private sector management positions, which are often complex. We recommend that policymakers should proceed with caution when considering blanket legislation requiring specific percentages of female representation in firms' top management, providing support for the debate that how females join the top management matters (Amore et al., 2014; Snellman and Solal, 2023) because this influences the attitude, perception, and performance of the females and top management as a whole, thereby impacting the overall performance of firms.

As with any research, we recognise the limitations of our paper and summarise them here. A first limitation relates to the sparse data on the demographics of a manager and the lack of information on their social networks. Age, ethnicity, cultural background, education level, nationality, directorships in other firms, religious beliefs, marital status, number of dependents, race, value systems, political ideologies, and so on are other demographic characteristics that can significantly influence on-the-job decision-making and the performance of a firm's manager (Hillman et al., 2002; Adams and Funk, 2012; Faccio et al., 2016). Previous studies, including Dutta and Mallick (2023), highlight the strong influence of social networks on a top manager's decisions. Further research that incorporates these additional attributes of managers and their social networks could generate interesting results. Finally, demographic

information about external auditors (Alhababsah and Yekini, 2021; Janahi et al., 2021) may be important factors to consider in the production and quality of a firm's audited reports. We believe that carrying out further analysis, exploring the gender diversity of external financial auditors operating under different legal traditions could potentially generate findings that carry practical, ethical, and policy implications, making a contribution to the literature on the determinants of firms' accounting disclosure behaviours.

Like other studies that use the WBES dataset, a second limitation is that our paper may suffer from omitted variable bias owing to the absence of longitudinal data. To alleviate the influence of this problem, we include several firm-level characteristics in the regressions and many country-level controls are used as part of addressing endogeneity concerns, whilst also implementing various robustness checks of our main findings. When the WBES data sets become available in a panel format for our sampled firms, an intriguing future exercise could be to track the performance of firms in terms of accounting disclosure as they transition from male to female or female to male managers, or as female or male top managers attain sustained experience in the role.

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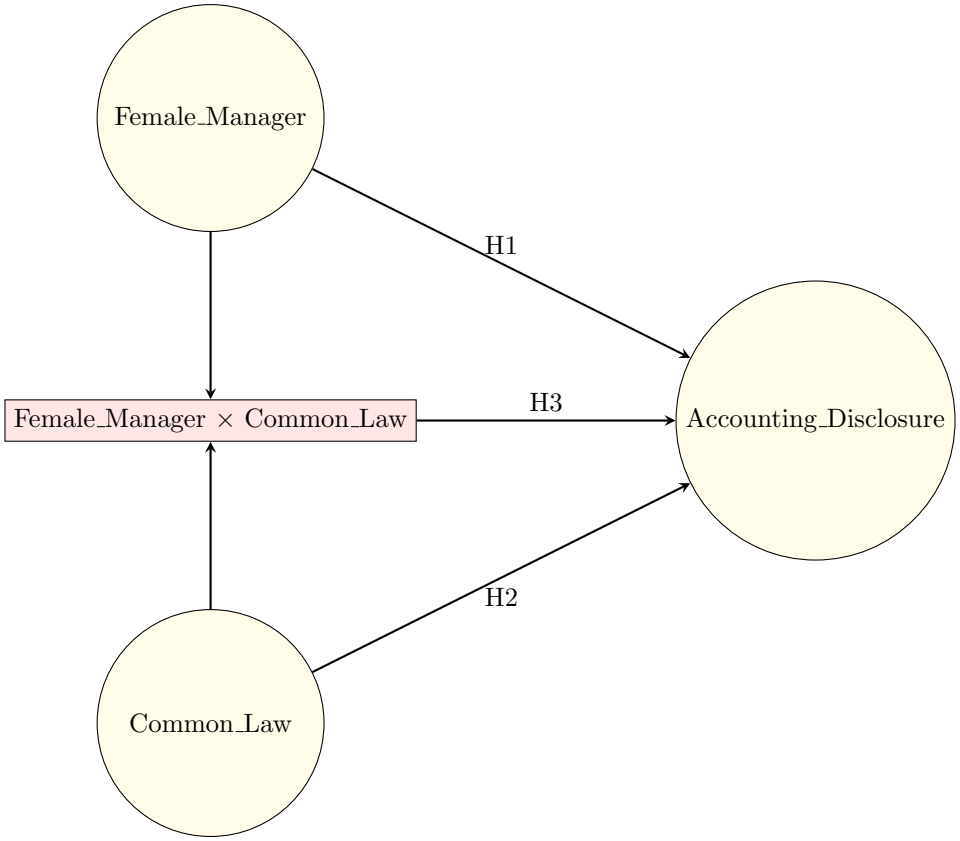

Figure 1: Conceptual framework.

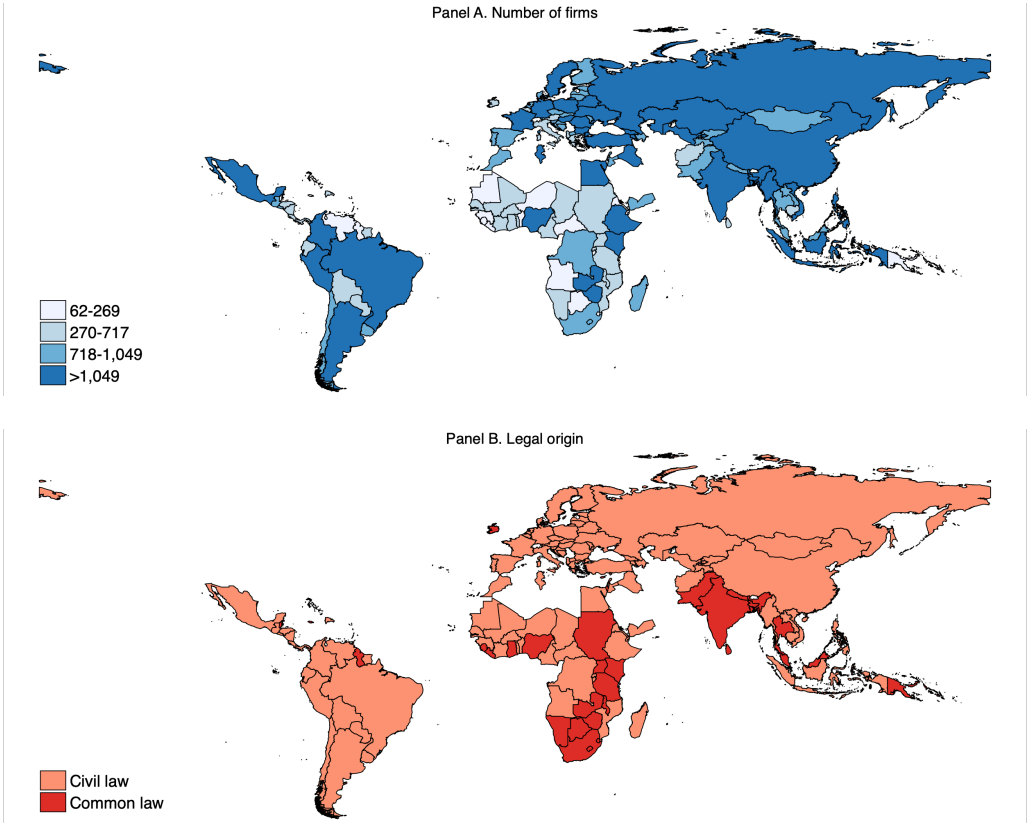

Figure 2: Sample coverage and legal origin by country.

The number of firms in the sample by country in panel A (Source: World Bank Enterprise Surveys (WBES)) and the legal origin of countries (firms) in the sample in panel B (Source: La Porta et al. (2008)). Calculated by the authors.

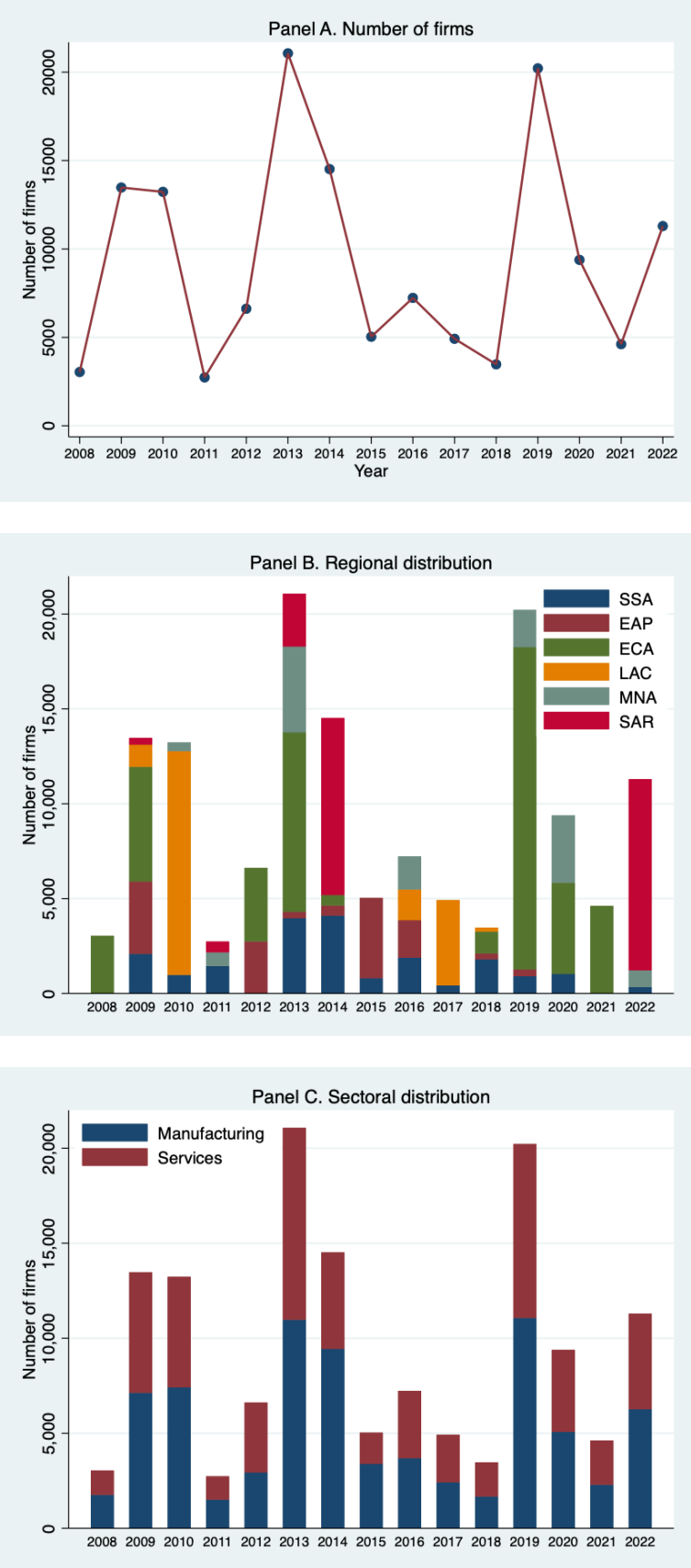

Figure 3: Number of firms in the sample with regional and sectoral distributions.

The number of firms in the sample by year in panel A and their regional and sectoral distributions from 2008 to 2022 in panels B and C, respectively. The regional classifications in panel B are SSA: Sub-Saharan Africa, EAP: East Asia and the Pacific, ECA: Europe and Central Asia, LAC: Latin America and the Carribean, MNA: Middle-East and North Africa, and SAR: South Asia. Source: World Bank Enterprise Surveys (WBES). Calculated by the authors.

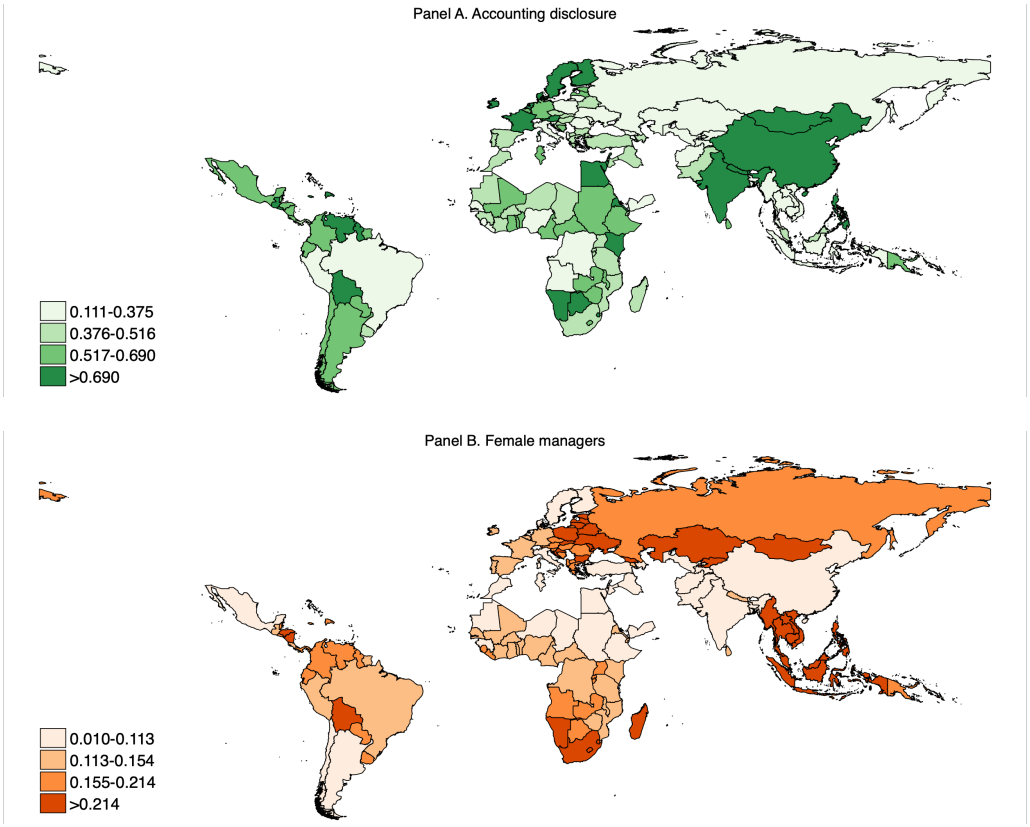

Figure 4: Accounting disclosure and female managers by country.

The distribution of firms in the sample with audited financial statements by country in panel A and those with female managers in panel B. Source: World Bank Enterprise Surveys (WBES). Calculated by the authors.

Table 1: Sample selection and coverage by country, firm, and year

Filtering procedures	Number of countries	Number of firms	Survey years
All firm-year observations from the WBES database for the period 2006-2022 contained in the February, 2023 released version.	154	191,862	2006-2022
Restricted to firms with non-missing values on the outcome variable of interest, Accounting_Disclosure.	154	187,002	2006-2022
Restricted to firms with non-missing values for key firm-level independent variable, Female_Manager.	148	158,574	2008-2022
Restricted to firms with non-missing values for baseline firm-level control variables: Firm_Age, Medium, Large, Manager's_Experience, Foreign, State, Subsidiary, Quality_Recognition, Exporter, Publicly_Listed, and Privately_Held.	147	145,228	2008-2022
Restricted to countries with non-missing values for legal origin.	139	140,860	2008-2022

A summary of the sample selection procedures employed to arrive at the number of countries, number of firms, and the survey years used for analysis. For details on the variables, see Table A1 in the Online Appendix. Source: World Bank Enterprise Surveys (WBES). Calculated by the authors.

Table 2: Legal origin of countries and firms used for analysis

Legal regime and origin		Sample countries	Number of firms	Share with accounting disclosure	Share with female manager
Common law	English	Antigua and Barbuda, Bahamas, Bangladesh, Barbados, Belize, Botswana, Cyprus, Dominica, Eswatini, Gambia, Ghana, Grenada, Guyana, India, Ireland, Israel, Jamaica, Kenya, Lesotho, Liberia, Malawi, Malaysia, Namibia, Nepal, Nigeria, Pakistan, Papua New Guinea, Sierra Leone, Solomon Islands, South Africa, Sri Lanka, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Sudan, Tanzania, Thailand, Trinidad and Tobago, Uganda, Zambia, Zimbabwe	38,871	62.77	12.59
Civil law	French	Afghanistan, Angola, Argentina, Belgium, Benin, Bolivia, Brazil, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Chile, Colombia, Congo Democratic Republic, Costa Rica, Côte d'Ivoire, Djibouti, Dominican Republic, Ecuador, Egypt, El Salvador, Eritrea, Ethiopia, France, Greece, Guatemala, Guinea, Honduras, Indonesia, Iraq, Italy, Jordan, Lebanon, Luxembourg, Madagascar, Mali, Malta, Mauritania, Mauritius, Mexico, Morocco, Mozambique, Netherlands, Nicaragua, Niger, Panama, Paraguay, Peru, Philippines, Portugal, Rwanda, Senegal, Spain, Suriname, Togo, Tunisia, Turkey, Uruguay, Venezuela, Yemen	54,365	56.44	12.43
	German	Austria, Germany	2,194	59.53	13.72
	Scandinavian	Denmark, Finland, Sweden	2,746	97.45	8.70
	Socialist	Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Cambodia, China, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyz Republic, Lao People's Democratic Republic, Latvia, Lithuania, Macedonia, Moldova, Mongolia, Myanmar, Poland, Romania, Russian Federation, Slovak Republic, Slovenia, Tajikistan, Ukraine, Uzbekistan, Vietnam	42,684	36.43	21.19
	Total	139	140,860		

This table describes the legal origins of countries, classifying them into English common law and non-English civil law. The civil law countries are then further split into French civil law (commercial code), German civil law (commercial code), Scandinavian civil law, and Socialist civil law countries. For each subgroup, the table provides the list of countries in our sample and the number of firms located in them, as well as the percentage of firms within each legal origin that have audited financial statements and female top managers. For details on the variables, see Table A1 in the Online Appendix. Sources: La Porta et al. (2008) and World Bank Enterprise Surveys (WBES). Calculated by the authors.

Table 3: Descriptive statistics

	Panel A: Descriptive statistics by aggregate sample					
	N	Mean	Median	Std. Dev.	Minimum	Maximum
	(1)	(2)	(3)	(4)	(5)	(6)
Accounting_Disclosure	140,860	0.530	0.530	0.499	0	1
Female_Manager	140,860	0.151	0.151	0.358	0	1
Common_Law	140,860	0.276	0.276	0.447	0	1
Firm_Age	140,860	0.750	0.750	0.433	0	1
Small	140,860	0.451	0.451	0.498	0	1
Medium	140,860	0.346	0.346	0.476	0	1
Large	140,860	0.203	0.203	0.403	0	1
Manager's_Experience	140,860	0.791	0.791	0.407	0	1
Foreign	140,860	0.068	0.068	0.252	0	1
State	140,860	0.006	0.006	0.078	0	1
Subsidiary	140,860	0.172	0.172	0.377	0	1
Quality_Recognition	140,860	0.252	0.252	0.434	0	1
Exporter	140,860	0.192	0.192	0.394	0	1
Publicly_Listed	140,860	0.054	0.054	0.225	0	1
Privately_Held	140,860	0.412	0.412	0.492	0	1
Other_Legal_Status	140,860	0.535	0.535	0.499	0	1

	Panel B: Descriptive statistics by gender and legal origin					
	Female manager?			Common law?		
	Yes	No		Yes	No	
	(N = 21,238)	(N = 119,622)		(N = 38,871)	(N = 101,989)	
	(7)	(8)	(9)	(10)	(11)	(12)
Accounting_Disclosure	0.451	0.544	***	0.628	0.492	***
Firm_Age	0.718	0.755	***	0.777	0.739	***
Small	0.539	0.435	***	0.431	0.458	***
Medium	0.306	0.353	***	0.355	0.342	***
Large	0.155	0.212	***	0.214	0.199	***
Manager's_Experience	0.743	0.800	***	0.739	0.811	***
Foreign	0.058	0.070	***	0.043	0.078	***
State	0.005	0.006		0.002	0.007	***
Subsidiary	0.152	0.175	***	0.192	0.164	***
Quality_Recognition	0.204	0.260	***	0.266	0.246	***
Exporter	0.164	0.197	***	0.142	0.211	***
Publicly_Listed	0.046	0.055	***	0.031	0.062	***
Privately_Held	0.459	0.403	***	0.161	0.507	***
Other_Legal_Status	0.495	0.542	***	0.807	0.431	***

Descriptive statistics for variables used in the benchmark regressions for the whole sample in panel A and by gender of top manager and legal origin of countries in panel B. In panel B, we use two-sample t-tests that compare, respectively, the difference between the mean values of the characteristics of female versus male managers in columns (7)-(9) and those of common law versus civil law origins in columns (10)-(12). For details on the variables, see Table A1 in the Online Appendix.
***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 4: Correlation matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Accounting_Disclosure	1													
(2) Female_Manager	-0.0662*	1												
(3) Firm_Age	0.0979*	-0.0302*	1											
(4) Medium	0.0686*	-0.0351*	0.0537*	1										
(5) Large	0.2122*	-0.0502*	0.1241*	-0.3673*	1									
(6) Manager's_Experience	0.0553*	-0.0502*	0.3680*	0.0215*	0.0577*	1								
(7) Foreign	0.1163*	-0.0165*	-0.0159*	0.001	0.1533*	-0.0147*	1							
(8) State	0.0295*	-0.0035	0.0141*	-0.0065*	0.0690*	-0.0175*	-0.0171*	1						
(9) Subsidiary	0.1479*	-0.0223*	0.0418*	0.0085*	0.1861*	0.0136*	0.1196*	0.0270*	1					
(10) Quality_Recognition	0.2283*	-0.0458*	0.1058*	0.0411*	0.3177*	0.0555*	0.1318*	0.0321*	0.1517*	1				
(11) Exporter	0.1482*	-0.0306*	0.0927*	0.0146*	0.2600*	0.0656*	0.1859*	0.0054*	0.1088*	0.2924*	1			
(12) Publicly_Listed	0.0693*	-0.0138*	0.0557*	-0.0069*	0.1533*	0.0125*	0.0625*	0.1113*	0.0927*	0.0921*	0.0736*	1		
(13) Privately_Held	0.0013	0.0406*	0.0084*	0.0585*	0.0620*	0.0539*	0.0794*	-0.0129*	0.0072*	0.0803*	0.1448*	-0.1993*	1	
(14) Common_Law	0.1212*	-0.0429*	0.0394*	0.0121*	0.0160*	-0.0786*	-0.0628*	-0.0298*	0.0335*	0.0199*	-0.0786*	-0.0613*	-0.3141*	1

Pairwise correlation coefficients between the main variables used for analysis. For details on the variables, see Table A1 in the Online Appendix.
* indicates significance at (or better than) the 5% level.

Table 5: Female manager and accounting disclosure

		Dependent variable: Accounting_Disclosure			
Independent variables	(1)	(2)	(3)	(4)	(5)
Female_Manager	**-0.0363*** **	**-0.0142*** **	**-0.0133*** **	**-0.0129*** **	**-0.0132*** **
	(0.003)	**(0.003)**	**(0.003)**	**(0.003)**	**(0.003)**
Firm_Age		0.0177***	0.0159***	0.0155***	0.0147***
		(0.003)	(0.003)	(0.003)	(0.003)
Medium		0.1219***	0.1213***	0.1179***	0.1169***
		(0.003)	(0.003)	(0.003)	(0.003)
Large		0.2264***	0.2261***	0.2223***	0.2203***
		(0.004)	(0.004)	(0.004)	(0.004)
Manager's_Experience		0.0239***	0.0226***	0.0225***	0.0230***
		(0.003)	(0.003)	(0.003)	(0.003)
Foreign		0.0964***	0.0961***	0.0964***	0.0963***
		(0.005)	(0.005)	(0.005)	(0.005)
State		0.1645***	0.1606***	0.1565***	0.1547***
		(0.015)	(0.015)	(0.016)	(0.016)
Subsidiary		0.0509***	0.0446***	0.0440***	0.0436***
		(0.003)	(0.003)	(0.003)	(0.003)
Quality_Recognition		0.1071***	0.1068***	0.1073***	0.1066***
		(0.003)	(0.003)	(0.003)	(0.003)
Exporter		0.0536***	0.0506***	0.0496***	0.0494***
		(0.003)	(0.003)	(0.003)	(0.003)
Publicly_Listed		0.0800***	0.0795***	0.0770***	0.0760***
		(0.006)	(0.006)	(0.006)	(0.006)
Privately_Held		0.0445***	0.0454***	0.0458***	0.0460***
		(0.003)	(0.003)	(0.003)	(0.003)
Country_FEs	Yes	Yes	No	No	No
Industry_FEs	Yes	Yes	No	No	No
Year_FEs	Yes	Yes	No	No	No
Country-Year_FEs	No	No	Yes	Yes	No
Industry-Year_FEs	No	No	Yes	Yes	No
Country-Industry_FEs	No	No	No	Yes	No
Country-Industry-Year_FEs	No	No	No	No	Yes
R^2 (Adjusted)	0.207	0.280	0.291	0.299	0.301
Observations	140,860	140,860	140,860	140,860	140,860

Regression results obtained by performing a linear probability model (LPM) on Equation (1) discussed in Section 3, examining the effect of the gender of a firm's top manager on its accounting disclosure practices. Heteroscedasticity-robust standard errors clustered at the firm level are reported in parentheses. For details on the variables, see Table A1 in the Online Appendix.
***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 6: Legal origin and accounting disclosure

	Dependent variable: Accounting_Disclosure				
Independent variables	(1)	(2)	(3)	(4)	(5)
Common_Law	**0.1043*** **	**0.1049*** **	**0.0700*** **	**0.1426*** **	**0.1453*** **
	(0.004)	**(0.004)**	**(0.005)**	**(0.005)**	**(0.006)**
Firm_Age		0.0252***	0.0231***	0.0233***	0.0227***
		(0.003)	(0.003)	(0.003)	(0.003)
Medium		0.1340***	0.1248***	0.1204***	0.1191***
		(0.003)	(0.003)	(0.003)	(0.003)
Large		0.2335***	0.2167***	0.2197***	0.2201***
		(0.004)	(0.004)	(0.004)	(0.004)
Manager's_Experience		0.0395***	0.0367***	0.0351***	0.0352***
		(0.003)	(0.003)	(0.003)	(0.003)
Foreign		0.1133***	0.1266***	0.1089***	0.1060***
		(0.005)	(0.005)	(0.005)	(0.005)
State		0.1169***	0.1346***	0.1305***	0.1301***
		(0.015)	(0.015)	(0.015)	(0.015)
Subsidiary		0.0733***	0.0573***	0.0463***	0.0450***
		(0.003)	(0.003)	(0.003)	(0.003)
Quality_Recognition		0.1364***	0.1413***	0.1176***	0.1176***
		(0.003)	(0.003)	(0.003)	(0.003)
Exporter		0.0599***	0.0718***	0.0599***	0.0577***
		(0.003)	(0.003)	(0.003)	(0.003)
Publicly_Listed		0.0417***	0.0827***	0.0850***	0.0813***
		(0.006)	(0.006)	(0.006)	(0.006)
Privately_Held		0.0043	0.0559***	0.0677***	0.0657***
		(0.003)	(0.003)	(0.003)	(0.003)
Region_FEs	No	No	Yes	No	No
Industry_FEs	Yes	Yes	Yes	No	No
Year_FEs	Yes	Yes	Yes	No	No
Region-Year_FEs	No	No	No	Yes	No
Industry-Year_FEs	No	No	No	Yes	No
Region-Industry-Year_FEs	No	No	No	No	Yes
R^2 (Adjusted)	0.0622	0.156	0.174	0.219	0.227
Observations	140,860	140,860	140,860	140,860	140,860

Regression results obtained by performing a linear probability model (LPM) on Equation (2) discussed in Section 3, examining the effect of legal origin of a country on the accounting disclosure practices of firms. Heteroscedasticity-robust standard errors clustered at the firm level are reported in parentheses. For details on the variables, see Table A1 in the Online Appendix.
***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 7: Female manager, legal origin, and accounting disclosure

	Dependent variable: Accounting_Disclosure				
Independent variables	(1)	(2)	(3)	(4)	(5)
Female_Manager	-0.0662***	-0.0496***	-0.0626***	-0.0271***	-0.0102**
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Common_Law	0.1055***	0.0783***	0.1081***	0.1161***	0.0823***
	(0.004)	(0.005)	(0.004)	(0.004)	(0.005)
Female_Manager × Common_Law			**-0.0154***	**-0.0608*****	**-0.0565*****
			(0.009)	**(0.008)**	**(0.008)**
Firm_Age				0.0254***	0.0232***
				(0.003)	(0.003)
Medium				0.1325***	0.1240***
				(0.003)	(0.003)
Large				0.2318***	0.2162***
				(0.004)	(0.004)
Manager's_Experience				0.0377***	0.0357***
				(0.003)	(0.003)
Foreign				0.1120***	0.1254***
				(0.005)	(0.005)
State				0.1164***	0.1338***
				(0.015)	(0.015)
Subsidiary				0.0733***	0.0575***
				(0.003)	(0.003)
Quality_Recognition				0.1371***	0.1419***
				(0.003)	(0.003)
Exporter				0.0602***	0.0720***
				(0.003)	(0.003)
Publicly_Listed				0.0427***	0.0835***
				(0.006)	(0.006)
Privately_Held				0.0063**	0.0571***
				(0.003)	(0.003)
Region_FEs	No	Yes	No	No	Yes
Industry_FEs	Yes	Yes	Yes	Yes	Yes
Year_FEs	Yes	Yes	Yes	Yes	Yes
R^2 (Adjusted)	0.0644	0.0788	0.0644	0.157	0.175
Observations	140,860	140,860	140,860	140,860	140,860

Regression results obtained by performing a linear probability model (LPM) on Equation (3) discussed in Section 3, examining the interaction effect of the gender of a firm's top manager and legal origin of a country on accounting disclosure practices of firms. Heteroscedasticity-robust standard errors clustered at the firm level are reported in parentheses. For details on the variables, see Table A1 in the Online Appendix.
***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 8: Instrumental variables analysis

	Dependent variable:				
	Female_Manager	Female_Manager × Common_Law		Accounting_Disclosure	
	First-stage			Second-stage	
Independent variables	(1)	(2)	(3)	(4)	(5)
Female_Manager				**-0.0373*** **	-0.1844***
				(0.013)	(0.012)
Common_Law		-0.0009	0.0009		0.1732***
		(0.003)	(0.002)		(0.005)
Female_Manager × Common_Law					**-0.3690*** **
					(0.024)
Female_Manager_Ciy	0.9919***	0.9983***	0.0004		
	(0.010)	(0.010)	(0.002)		
Female_Manager_Ciy × Common_Law		-0.0019	0.9969***		
		(0.017)	(0.015)		
Firm-level controls	Yes	Yes	Yes	Yes	Yes
Country_FEs	Yes	No	No	Yes	No
Industry_FEs	Yes	Yes	Yes	Yes	Yes
Year_FEs	Yes	Yes	Yes	Yes	Yes
F-stat	8926.89	6847.92	2329.88		
R^2 (Adjusted)	0.160	0.161	0.254	-0.00169	-0.0340
Observations	140,860	140,860	140,860	140,860	140,860

Regression results obtained by performing an instrumental variable (IV) analysis on Equations (1) and (3) discussed in Section 3, providing robustness checks for Hypotheses 1 and 3. The exclusion restrictions are Female_Manager_Ciy and its interaction with Common_Law. Heteroscedasticity-robust standard errors clustered at the firm level are reported in parentheses. For details on the variables, see Table A1 in the Online Appendix.

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 9: Propensity score matching analysis

	Dependent variable: Accounting_Disclosure				
	Nearest neighbour	Caliper	Radius	Kernel	Local Linear Regression
Independent variables	(1)	(2)	(3)	(4)	(5)
	Panel A: Test for Hypothesis 1				
Female_Manager	**-0.0093*** **	**-0.0093*** **	**-0.0094*** **	**-0.0096*** **	**-0.0093*** **
	(0.0034)	**(0.0034)**	**(0.0034)**	**(0.0034)**	**(0.0034)**
Firm-level_Controls	Yes	Yes	Yes	Yes	Yes
Country_FEs	Yes	Yes	Yes	Yes	Yes
Industry_FEs	Yes	Yes	Yes	Yes	Yes
Year_FEs	Yes	Yes	Yes	Yes	Yes
R^2 (Adjusted)	0.289	0.289	0.285	0.286	0.289
Observations	140,091	140,091	140,860	140,860	140,091
	Panel B: Test for Hypothesis 2				
Common_Law	**0.0182** **	**0.0182** **	**0.0202*** **	**0.0190*** **	**0.0182** **
	(0.0071)	**(0.0071)**	**(0.0070)**	**(0.0071)**	**(0.0071)**
Firm-level_Controls	Yes	Yes	Yes	Yes	Yes
Region_FEs	Yes	Yes	Yes	Yes	Yes
Industry_FEs	Yes	Yes	Yes	Yes	Yes
Year_FEs	Yes	Yes	Yes	Yes	Yes
R^2 (Adjusted)	0.172	0.172	0.169	0.169	0.172
Observations	140,091	140,091	140,860	140,860	140,091
	Panel C: Test for Hypothesis 3				
Female_Manager × Common_Law	**-0.0449*** **	**-0.0449*** **	**-0.0422*** **	**-0.0423*** **	**-0.0449*** **
	(0.0083)	**(0.0083)**	**(0.0083)**	**(0.0083)**	**(0.0083)**
Firm-level_Controls	Yes	Yes	Yes	Yes	Yes
Region_FEs	Yes	Yes	Yes	Yes	Yes
Industry_FEs	Yes	Yes	Yes	Yes	Yes
Year_FEs	Yes	Yes	Yes	Yes	Yes
R^2 (Adjusted)	0.173	0.173	0.169	0.17	0.173
Observations	140,091	140,091	140,860	140,860	140,091

Weighted regression results obtained by performing a linear probability model (LPM) on Equations (1), (2), and (3) discussed in Section 3 in panels A, B, and C, respectively, using matched sample from various propensity score matching techniques in columns (1)-(5). Bootstrapped standard errors computed with 100 replications in a procedure that simultaneously generates propensity scores and weighted regressions are reported in parentheses. For details on the variables, see Table A1 in the Online Appendix.
***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

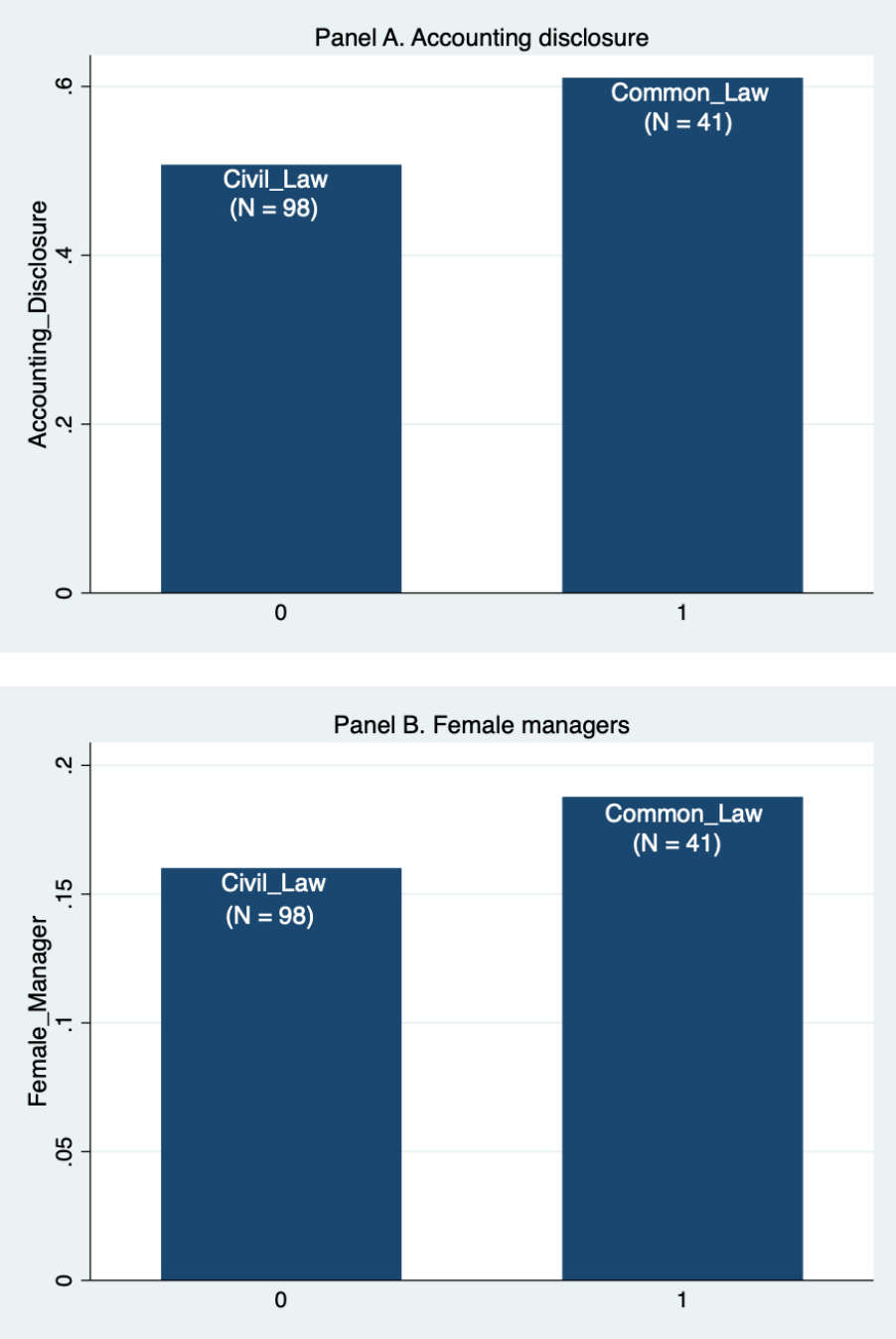

Figure A1: Accounting disclosure and female managers across legal origins.

The average number of firms in the sample with Accounting_Disclosure (audited financial statements) by legal origin in panel A and the average number of firms with female top managers by legal origin in panel B. 0 = Civil law origin; 1 = Common law origin; N = Number of countries. Sources: World Bank Enterprise Surveys (WBES) and La Porta et al. (2008). Calculated by the authors.

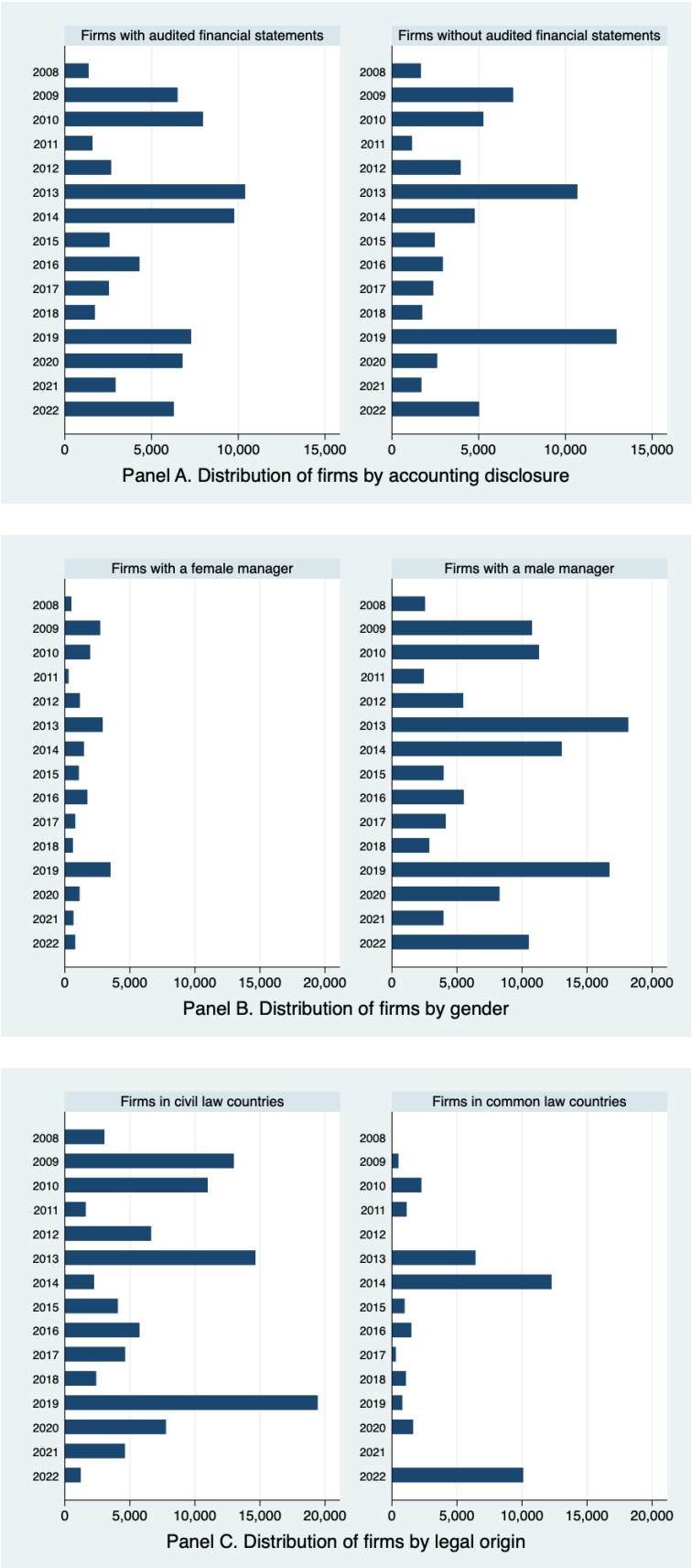

Figure A2: Firms by audited financial statements, gender of top manager, and legal origin.

The number of firms in the sample over time by Accounting_Disclosure (audited financial statements) in panel A, gender of top manager in panel B, and legal origins of countries in panel C. Sources: World Bank Enterprise Surveys (WBES) and La Porta et al. (2008). Calculated by the authors.

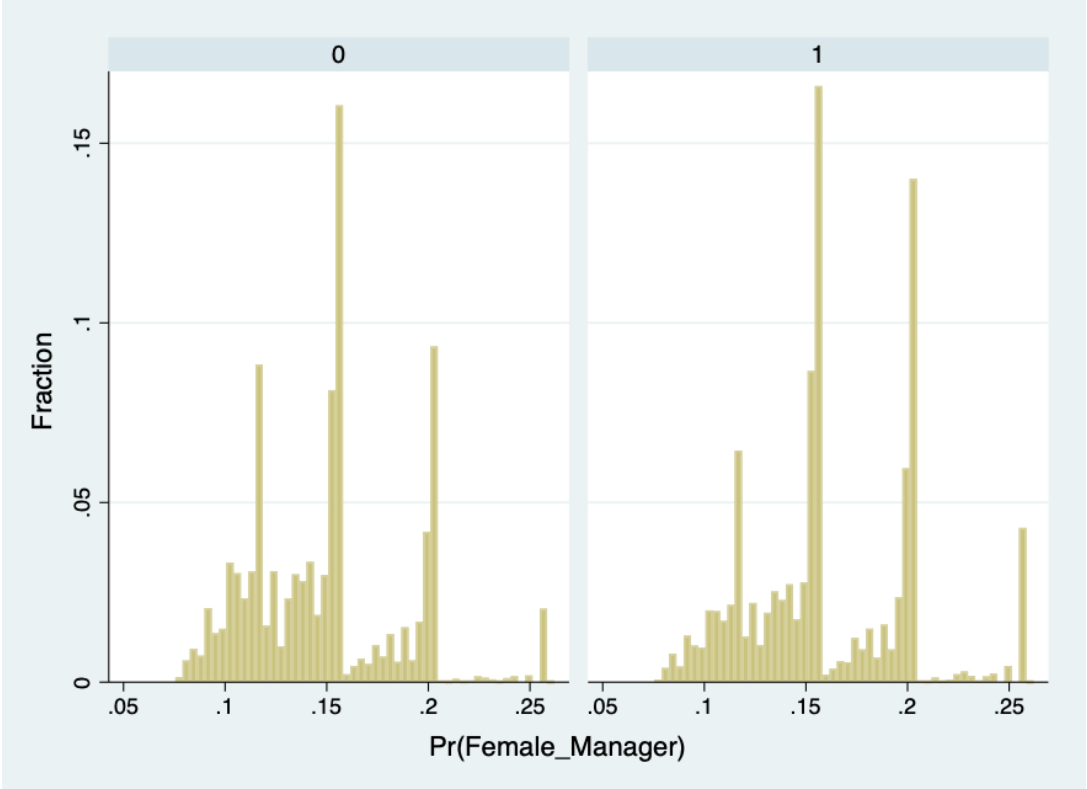

Figure A3: Propensity scores for treated and matched samples.

The distributions of the estimated propensity scores of the treated group (that is, female-managed firms on the right-hand side) and the control group (that is, male-managed firms on the left-hand side).

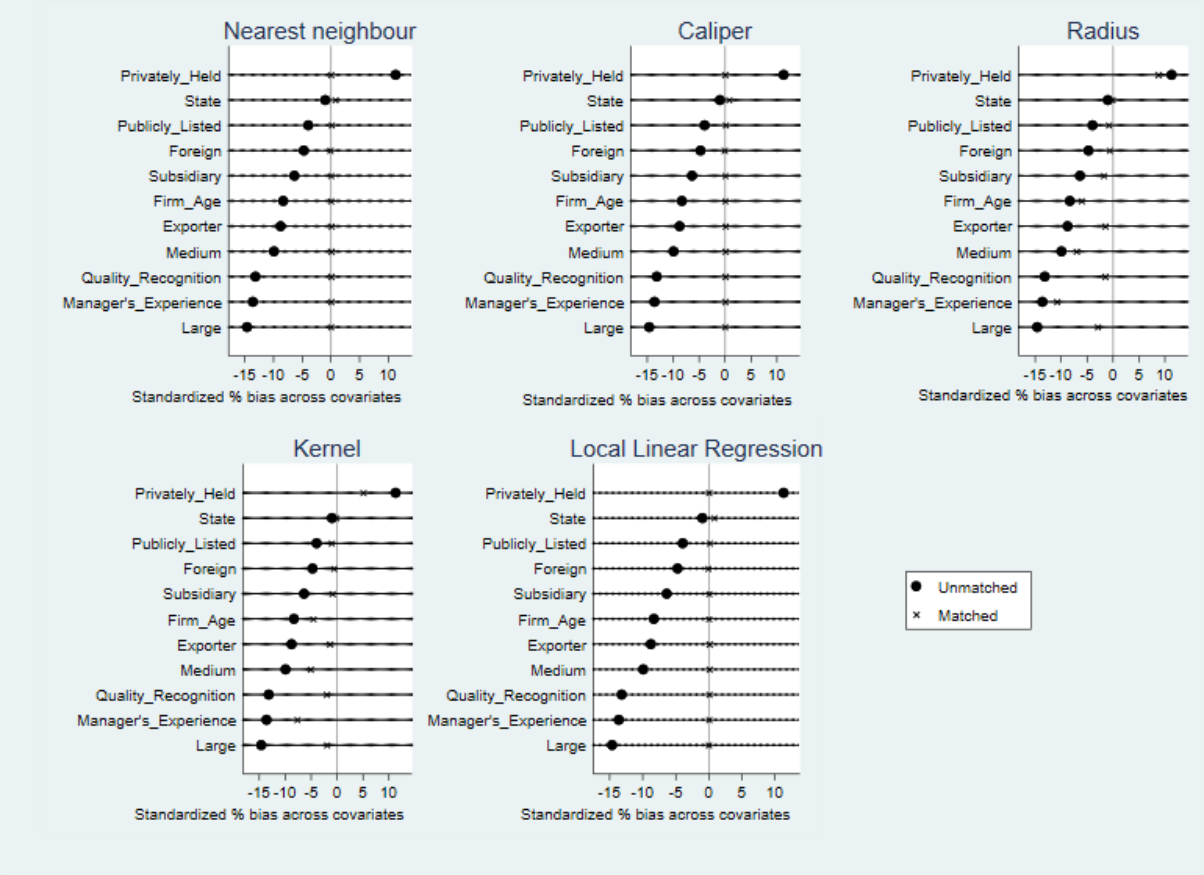

Figure A4: Standardised percentage bias for covariates before and after matching.

The degree of covariate imbalance based on standardised percentage bias before and after matching for each of the five matching techniques employed. The black dots represent the bias across covariates before matching, whilst the black crosses represent the bias across covariates after matching. As shown, all biases appear removed in the cases of nearest neighbour, calliper, and local linear regression matching approaches, with the treated group (that is, female-managed firms) tending to be perfectly matched to the control group (that is, male-managed firms). Although biases are reduced post-matching in the cases of radius and kernel matching techniques, it is easy to see that some pre-matching biases survive.

Table A1: Definitions of variables and data sources

Variable	Description and data sources
Accounting_Disclosure	A dummy variable that equals 1 if the annual financial statement of a firm is checked and certified by an external auditor, and 0 otherwise. Source: World Bank Enterprise Surveys, k21.
Female_Manager	A dummy variable that equals 1 if a firm is managed by a woman, and 0 otherwise. Source: World Bank Enterprise Surveys, b7a.
Female-led_Firms	A dummy variable that equals 1 if a firm has a female top manager (i.e., Female_Manager) and/or is majority-female-owned (using a minimum 60% threshold), and 0 otherwise. Source: World Bank Enterprise Surveys, b7a; b4a.
Firm_Age	A dummy variable that equals 1 if a firm is at least 10 years old, and 0 otherwise. Source: World Bank Enterprise Surveys, b5.
Small	A dummy variable that equals 1 if a firm has 0-19 full-time equivalent employees, and 0 otherwise. Source: World Bank Enterprise Surveys, size.
Medium	A dummy variable that equals 1 if a firm has 20-99 full-time equivalent employees, and 0 otherwise. Source: World Bank Enterprise Surveys, size.
Large	A dummy variable that equals 1 if a firm has 100 or more full-time equivalent employees, and 0 otherwise. Source: World Bank Enterprise Surveys, size.
Manager's_Experience	A dummy variable that equals 1 if a firm's manager has acquired at least 10 years of experience in the firm's sector of activities, and 0 otherwise. Source: World Bank Enterprise Surveys, b7.
Foreign	A dummy variable that equals 1 if the share of a firm owned by foreign entities is at least 50%, and 0 otherwise. Source: World Bank Enterprise Surveys, b2b.
State	A dummy variable that equals 1 if the share of a firm owned by the government is at least 50%, and 0 otherwise. Source: World Bank Enterprise Surveys, b2c.
Subsidiary	A dummy variable that equals 1 if a firm is part of a larger establishment, and 0 otherwise. Source: World Bank Enterprise Surveys, a7.
Quality_Recognition	A dummy variable that equals 1 if a firm holds an internationally recognised quality certification, and 0 otherwise. Source: World Bank Enterprise Surveys, b8.
Exporter	A dummy variable that equals 1 if a firm directly exports any of its goods, and 0 otherwise. Source: World Bank Enterprise Surveys, d3c.
Publicly_Listed	A dummy variable that equals 1 if a firm has the legal status of publicly listed company, and 0 otherwise. Source: World Bank Enterprise Surveys, b1.
Privately_Held	A dummy variable that equals 1 if a firm has the legal status of privately held limited liability company, and 0 otherwise. Source: World Bank Enterprise Surveys, b1.
Other_Legal_Statuses	A dummy variable that equals 1 if a firm has the legal status of either sole proprietorship, partnership, limited partnership, or any other, and 0 otherwise. Source: World Bank Enterprise Surveys, b1.
Common_Law	A dummy variable that equals 1 if a firm is located in an English common law country, and 0 otherwise. Source: La Porta et al. (2008).
French_Civil_Law	A dummy variable that equals 1 if a firm is located in a French civil law country, and 0 otherwise. Source: La Porta et al. (2008).
German_Civil_Law	A dummy variable that equals 1 if a firm is located in a German civil law country, and 0 otherwise. Source: La Porta et al. (2008).
Scandinavian_Civil_Law	A dummy variable that equals 1 if a firm is located in a Scandinavian civil law country, and 0 otherwise. Source: La Porta et al. (2008).
Socialist_Civil_Law	A dummy variable that equals 1 if a firm is located in a Socialist civil law country, and 0 otherwise. Source: La Porta et al. (2008).
Income	The log of GDP per capita in constant 2015 US$. Source: World Development Indicators.
Growth	Annual GDP growth rate. Source: World Development Indicators.

Variable	Description and data sources
Inflation	Annual percentage change in consumer prices. Source: World Development Indicators.
Education	Gross primary school enrolment in percent. Source: World Development Indicators.
Corruption control	An index that captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Estimated values range from -2.5 to 2.5, with higher values indicating greater control of corruption. Source: World Governance Indicators.
Government effectiveness	An index that captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Estimated values range from -2.5 to 2.5, with higher values indicating greater government effectiveness. Source: World Governance Indicators.
Political stability	An index that captures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism, that may destabilise or topple a government. Estimated values range from -2.5 to 2.5, with higher values indicating a higher perceived level of political stability. Source: World Governance Indicators.
Rule of law	An index that captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Estimated values range from -2.5 to 2.5, with higher values indicating a higher level of adherence to the rule of law. Source: World Governance Indicators.
Regulatory quality	An index that captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Estimated values range from -2.5 to 2.5, with higher values indicating greater regulatory quality. Source: World Governance Indicators.
Voice and accountability	An index that captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and the presence of a free media. Estimated values range from -2.5 to 2.5, with higher values indicating higher levels of accountability. Source: World Governance Indicators.
Religion	This refers to the percentage of the population of each country that belonged to the three most widely spread religions in the world in 1980. The three religions are Catholicism, Islam, and Protestantism, with the remaining religions serving as the reference category. Source: La Porta et al. (1999).
Protestant	A dummy variable that equals 1 if a country has a Protestant majority, and 0 otherwise. Source: Chen (2013); Liang and Renneboog (2017).
Power distance	An index measuring the extent to which the less powerful members of institutions and organisations within a society expect and accept that power is distributed unequally. Source: `https://geerthofstede.com`.
Individualism	An index measuring the extent to which members of a group are interdependent. It is a measure opposite to collectivism, reflecting a society in which the ties between individuals are loose, with a person expected to look after himself or herself and his or her immediate family only. On the other hand, collectivism refers to a society in which people from birth onwards are integrated into strong, cohesive in-groups, which continue to protect them throughout their lifetime in exchange for unquestioning loyalty. Source: `https://geerthofstede.com`.
Masculinity	An index measuring the extent to which traditional social gender roles are clearly distinct in a society: Men are supposed to be assertive, tough, and focused on material success; women are supposed to be more modest, tender, and concerned with the quality of life. It is a measure opposite to femininity, which refers to a society in which social gender roles overlap: both men and women are supposed to be modest, tender, and concerned with the quality of life. Source: `https://geerthofstede.com`.

Variable	Description and data sources
Uncertainty avoidance	An index measuring the extent to which the members of institutions and organisations within a society feel threatened by uncertain, unknown, ambiguous, or unstructured situations. Source: `https://geerthofstede.com`.
Long-term orientation	An index measuring the extent to which a society fosters virtues oriented toward future rewards, in particular adaptation, perseverance, and thrift. It is a measure opposite to short-term orientation, which refers to a society that fosters virtues related to the past and present, in particular respect for tradition, preservation of "face", and fulfilling social obligations. Source: `https://geerthofstede.com`.
Indulgence	An index measuring the extent to which a society allows relatively free gratification of some desires and feelings, especially those that have to do with leisure, merrymaking with friends, spending, consumption, and sex. It is a measure opposite to restraint, which refers to a society with controls of such gratification and one in which people feel less able to enjoy their lives. Source: `https://geerthofstede.com`.

Table A2: Additional descriptive statistics

	N	Mean	Median	Std. Dev.	Minimum	Maximum
	(1)	(2)	(3)	(4)	(5)	(6)
Female-led_Firms	140,860	0.140	0.140	0.347	0	1
French_Civil_Law	140,860	0.386	0.386	0.487	0	1
German_Civil_Law	140,860	0.0156	0.0156	0.124	0	1
Scandinavian_Civil_Law	140,860	0.0195	0.0195	0.138	0	1
Socialist_Civil_Law	140,860	0.303	0.303	0.460	0	1
Income	140,375	8.352	8.352	1.136	5.721	11.58
Growth	140,638	3.969	3.969	4.135	-14.14	21.45
Inflation	132,873	1.587	1.587	0.917	-5.073	4.081
Education	125,483	4.638	4.638	0.0989	4.011	4.999
Corruption control	140,860	-0.300	-0.300	0.773	-1.534	2.239
Government effectiveness	140,860	-0.0903	-0.0903	0.718	-1.655	1.999
Political stability	140,860	-0.491	-0.491	0.857	-2.677	1.349
Rule of law	140,860	-0.227	-0.227	0.759	-1.838	2.049
Regulatory quality	140,860	-0.0835	-0.0835	0.745	-2.084	1.895
Voice and accountability	140,860	-0.149	-0.149	0.855	-2.160	1.658
Catholic 1980	107,253	29.28	29.28	37.89	0	97.30
Muslim 1980	107,253	23.60	23.60	34.03	0	99.40
Protestant 1980	107,253	7.173	7.173	15.78	0	95.20
Other religions 1980	107,253	39.94	39.94	36.02	0.300	98.60
Protestantism	107,253	0.0467	0.0467	0.211	0	1
Power distance	81,937	69.16	69.16	18.37	11	100
Individualism	81,937	40.64	40.64	18.23	6	80
Masculinity	81,937	49.30	49.30	16.05	5	100
Uncertainty avoidance	81,937	64.91	64.91	23.50	13	100
Long-term orientation	108,630	47.14	47.14	23.08	4	87
Indulgence	108,498	36.04	36.04	21.27	0	100

Table A3: Testing differences in the mean of main firm-level variables by gender and legal origin

	Female manager?		Common law?	
	Yes	No	Yes	No
	(N = 21,238)	(N = 119,622)	(N = 38,871)	(N = 101,989)
	t-test	MW test	t-test	MW test
Accounting_Disclosure	0.0000	0.0000	0.0000	0.0000
Firm_Age	0.0000	0.0000	0.0000	0.0000
Small	0.0000	0.0000	0.0000	0.0000
Medium	0.0000	0.0000	0.0000	0.0000
Large	0.0000	0.0000	0.0000	0.0000
Manager's_Experience	0.0000	0.0000	0.0000	0.0000
Foreign	0.0000	0.0000	0.0000	0.0000
State	0.1915	0.1915	0.0000	0.0000
Subsidiary	0.0000	0.0000	0.0000	0.0000
Quality_Recognition	0.0000	0.0000	0.0000	0.0000
Exporter	0.0000	0.0000	0.0000	0.0000
Publicly_Listed	0.0000	0.0000	0.0000	0.0000
Privately_Held	0.0000	0.0000	0.0000	0.0000
Other_Legal_Status	0.0000	0.0000	0.0000	0.0000

The p-values of the t-test and the Wilcoxon rank-sum (Mann-Whitney) test reported in Table 3 of the main text. MW: Mann-Whitney.

Table A4: Measures of overall imbalance

	Pseudo R^2	p> χ^2	Mean Bias	Median Bias	Rubin's B	Rubin's R
	(1)	(2)	(3)	(4)	(5)	(6)
(1) Unmatched	0.013	0.000	8.706	8.775	29.51	1.061
(2) Nearest neighbour	0.000	1.000	0.110	0.049	0.813	1.112
(3) Calliper	0.000	1.000	0.110	0.049	0.813	1.112
(4) Radius	0.006	0.000	3.836	1.798	17.78	1.285
(5) Kernel	0.002	0.000	2.798	1.987	11.73	1.195
(6) Local linear regression	0.000	1.000	0.110	0.049	0.813	1.112

Various measures of overall imbalance between treated and untreated groups before matching in row (1) and after matching in rows (2)-(6). Columns (1)-(6) report, respectively, the Pseudo R^2 from the propensity score estimation, the likelihood ratio test (p> χ^2) based on the joint significance of all model coefficients, the overall mean bias from the distribution of individual biases, the overall median bias from the distribution of individual biases, the standardised difference in the means of the propensity scores of the treated and untreated groups (Rubin's B), and the ratio of the variance of the propensity scores of the treated and untreated groups (Rubin's R). A matching is judged to be successful if Pseudo R^2 is low and the likelihood ratio test rejects H_0, whilst a matching is passed as sufficiently balanced if Rubin's B<25 and 0.5<Rubin's R < 2.

Table A5: Accounting for additional controls

	Dependent variable: Accounting_Disclosure										
Additional control:	Income	Growth	Inflation	Education	All macro	Corruption control	Government effectiveness	Political stability	Rule of law	Regulatory quality	Voice and accountability
Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Panel A: Test of Hypothesis 1										
Female_Manager	-0.0143***	-0.0142***	-0.0142***	-0.0153***	-0.0155***	-0.0142***	-0.0142***	-0.0141***	-0.0142***	-0.0141***	-0.0141***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Firm-level controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2 (Adjusted)	0.281	0.280	0.282	0.282	0.285	0.280	0.280	0.280	0.280	0.280	0.280
Observations	140,375	140,638	132,873	125,483	118,114	140,860	140,860	140,860	140,860	140,860	140,860
	Panel B: Test of Hypothesis 2										
Common_Law	0.0231***	0.0686***	0.1158***	0.0506***	0.0532***	0.0496***	0.0191***	0.0580***	0.0327***	0.0384***	0.0393***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Firm-level controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2 (Adjusted)	0.179	0.175	0.180	0.183	0.193	0.183	0.188	0.177	0.186	0.181	0.182
Observations	140,375	140,638	132,873	125,483	118,114	140,860	140,860	140,860	140,860	140,860	140,860
	Panel C: Test of Hypothesis 3										
Female_Manager× Common_Law	-0.0588***	-0.0576***	-0.0214**	-0.0616***	-0.0315***	-0.0593***	-0.0632***	-0.0538***	-0.0580***	-0.0602***	-0.0527***
	(0.008)	(0.008)	(0.009)	(0.009)	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Firm-level controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2 (Adjusted)	0.179	0.175	0.180	0.184	0.193	0.184	0.189	0.178	0.186	0.182	0.182
Observations	140,375	140,638	132,873	125,483	118,114	140,860	140,860	140,860	140,860	140,860	140,860

Regression results obtained by performing a linear probability model (LPM) on Equations (1), (2), and (3) discussed in Section 3 in panels A, B, and C, respectively, including, as additional control variables, income in column (1), growth in column (2), inflation in column (3), education in column (4), income, growth, inflation, and education in column (5), corruption control in column (6), government effectiveness in column (7), political stability in column (8), rule of law in column (9), regulatory quality in column (10), and voice and accountability in column (11). Heteroscedasticity-robust standard errors clustered at the firm level are reported in parentheses. For details on the variables, see Table A1 in the Online Appendix.

***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A6: Alternative estimation technique

	Dependent variable: Accounting_Disclosure					
Independent variables	(1)	(2)	(3)	(4)	(5)	(6)
Female_Manager	-0.0447***	-0.0134***			-0.0258**	-0.0088**
	(0.0110)	(0.0033)			(0.0116)	(0.0039)
Common_Law			0.1893***	0.0643***	0.2278***	0.0773***
			(0.0141)	(0.0048)	(0.0148)	(0.0050)
Female_Manager × Common_Law					-0.1681***	-0.0571***
					(0.0243)	(0.0083)
Country_FEs/Region_FEs	Yes	Yes	Yes	Yes	Yes	Yes
Industry_FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year_FEs	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.234		0.1381		0.1385	
Observations	140,860	140,860	140,860	140,860	140,860	140,860

Regression results obtained by performing a Probit regression analysis on Equations (1)-(3) discussed in Section 3, providing parameter estimates in columns (1), (3), and (5) and the corresponding marginal effects in columns (2), (4), and (6). Heteroscedasticity-robust standard errors clustered at the firm level are reported in parentheses. For details on the variables, see Table A1 in the Online Appendix.
***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A7: Alternative measures of gender and legal origins

	Dependent variable: Accounting_Disclosure				
Independent variables	(1)	(2)	(3)	(4)	(5)
Female_Manager				-0.0648***	
				(0.007)	
Female-Led_Firms	-0.0116***		-0.0115***		-0.0348***
	(0.003)		(0.004)		(0.008)
Common_Law			0.0747***		
			(0.005)		
French_Civil_Law		-0.0760***		-0.0914***	-0.0840***
		(0.005)		(0.005)	(0.005)
Female_Manager × French_Civil_Law				0.0807***	
				(0.010)	
German_Civil_Law		-0.1456***		-0.1649***	-0.1589***
		(0.015)		(0.015)	(0.015)
Female_Manager × German_Civil_Law				0.1071***	
				(0.031)	
Scandinavian_Civil_Law		0.3026***		0.2835***	0.2945***
		(0.009)		(0.009)	(0.009)
Female_Manager × Scandinavian_Civil_Law				0.1130***	
				(0.018)	
Socialist_Civil_Law		-0.1498***		-0.1590***	-0.1499***
		(0.007)		(0.007)	(0.007)
Female_Manager × Socialist_Civil_Law				0.0431***	
				(0.009)	
Female-Led_Firms × Common_Law			-0.0283***		
			(0.009)		
Female-Led_Firms × French_Civil_Law					0.0522***
					(0.010)
Female-Led_Firms × German_Civil_Law					0.0868***
					(0.031)
Female-Led_Firms × Scandinavian_Civil_Law					0.0580***
					(0.018)
Female-Led_Firms × Socialist_Civil_Law					0.0088
					(0.009)
Country_FEs/Region_FEs	Yes	Yes	Yes	Yes	Yes
Industry_FEs	Yes	Yes	Yes	Yes	Yes
Year_FEs	Yes	Yes	Yes	Yes	Yes
R^2 (Adjusted)	0.280	0.186	0.174	0.186	0.186
Observations	140,860	140,860	140,860	140,860	140,860

Regression results obtained by performing a linear probability model (LPM) on Equations (1)-(3) discussed in Section 3, using an alternative measure of female manager and representation of legal origins. Heteroscedasticity-robust standard errors clustered at the firm level are reported in parentheses. For details on the variables, see Table A1 in the Online Appendix.
***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A8: Sub-sample analysis

	Dependent variable: Accounting_Disclosure							
	Truthful	Registered	SSA	EAP	ECA	LAC	MNA	SAS
Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Panel A: Test for Hypothesis 1							
Female_Manager	-0.0174***	-0.0145***	-0.0151	-0.0193**	-0.0205***	0.0002	0.0291*	0.0339***
	(0.003)	(0.004)	(0.009)	(0.008)	(0.005)	(0.009)	(0.016)	(0.010)
Firm-level controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country_FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry_FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year_FEs	Yes	Ye	Yes	Yes	Yes	Yes	Yes	Yes
R^2 (Adjusted)	0.282	0.287	0.233	0.370	0.285	0.252	0.222	0.199
Observations	126,517	107,376	19,776	14,318	50,548	19,287	13,827	23,104
	Panel B: Test for Hypothesis 2							
Common_Law	0.0462***	0.0934***	0.1331***	-0.0204	0.1623***	0.1272***	0.2490***	0.6376***
	(0.006)	(0.006)	(0.008)	(0.015)	(0.016)	(0.012)	(0.015)	(0.018)
Firm-level controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region_FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry_FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year_FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2 (Adjusted)	0.175	0.197	0.178	0.232	0.229	0.190	0.151	0.162
Observations	126,517	107,376	19,776	14,318	50,548	19,287	13,827	23,104
	Panel C: Test for Hypothesis 3							
Female_Manager x Common_Law	-0.0594***	-0.0718***	0.0026	-0.1939***	-0.0777	-0.0116	0.0046	0.0760
	(0.009)	(0.010)	(0.019)	(0.027)	(0.048)	(0.027)	(0.056)	(0.058)
Firm-level controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region_FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry_FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year_FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2 (Adjusted)	0.175	0.197	0.178	0.236	0.229	0.189	0.151	0.162
Observations	126,517	107,376	19,776	14,318	50,548	19,287	13,827	23,104

Regression results obtained by performing a linear probability model (LPM) on Equations (1), (2), and (3) discussed in Section 3 in panels A, B, and C, respectively, in a sub-sample analyses for firms adjudged as providing truthful answers to the survey questions in column (1), registered firms in column (2), firms in Africa in column (3), firms in East Asia and the Pacific in column (4), firms in Europe and Central Asia in column (5), firms in Latin America and the Caribbean in column (6), firms in the Middle-East and North Africa in column (7), and firms in South Asia in column (8). Heteroscedasticity-robust standard errors clustered at the firm level are reported in parentheses. For details on the variables, see Table A1 in the Online Appendix. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.