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Freedom of the press and corporate misconduct

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Abstract

This study examines how freedom of the press affects corporate misconduct, focusing mainly on earnings management. I find that firms engage more in earnings management when they have a high percentage of sales in countries with restricted media freedom. I find that the influence of foreign partners' media freedom on earnings management depends on how domestic investors process information about firm export markets and how multinational firms shape their relationship with stakeholders. Additionally, the presence of analysts in foreign countries reduces firms' incentives to exploit media restriction to manipulate earnings. Finally, I further show that insiders of these firms tend to be involved in opportunistic insider trading, which could indicate corporate misconduct. Overall, these results show that corporate misconduct can be in part explained by a spill-over effect of the media freedom of export markets.

KEYWORDS
corporate governance, corporate misconduct, earnings management, foreign product markets, freedom of the press, opportunistic insider trading

JEL CLASSIFICATION
G14, G30, M1, M41

1 | INTRODUCTION

The media acts as a monitor or watchdog to reduce accounting fraud (Miller, 2006). A firm may be covered often and by many news sources, but the information can still be biased if the media is controlled or influenced by other

parties (Burgess, 2010). A growing literature on media independence has indicated that in an environment with high media freedom, information can flow more openly to the public (J. -B. Kim et al., 2017; You et al., 2018). More specifically, such an environment incentivizes journalists and the media industry to disseminate news and share unrestricted perspectives without fear of repercussion, which, in turn, improves outsiders' attention. Thus, the quality of media matters. Existing literature on media freedom and firm activities (see, e.g., Kanagaretnam et al., 2018; J. -B. Kim et al., 2017) has mainly focused on the cross-sectional country level instead of the firm level. This focus may be due to the fact that the variation of media freedom within each country is relatively challenging to study over time. Therefore, in this paper, I explore the impact of media freedom on corporate misconduct, with a special focus on earnings management, using exposure to foreign product markets as in Krause et al. (2016) and Berger et al. (2017) to fill this research gap.

I argue that there are two main reasons why firms engage in earnings management when they have high exposure to countries where media freedom is restricted. First, different from purely domestic firms, multinational firms need to consider the interests and expectations of a larger number and diversity of stakeholders, such as capital providers, competitors, customers, employees, communities, and governments (Detomasi, 2007). As a result, multinational firms may change their activities, such as increasing corporate social responsibility (CSR) investment, to respond to stakeholder demands (Attig et al., 2016; Brammer et al., 2006). In support of this argument, Krause et al. (2016) find that when firms expand their geographical operations to countries with cultural differences, they may adjust their strategies and corporate governance factors to match those of the regions in which the firms need to compete for sales. Accordingly, when firms have high engagement in countries with low media freedom, firms would align with their local partners. Notably, firms may use earnings management to mislead not only shareholders but also non-shareholding stakeholders (Healy & Wahlen, 1999). Thus, it is likely that by entering a foreign market, a firm may alter financial reports either to align with local partners or societal and regulatory requirements or to mislead their stakeholders. Moreover, as found in Attig et al. (2016), multinationals with subsidiaries in countries with strong political and legal institutions have higher CSR ratings. This implies that increased visibility through expanded media coverage of countries with free media (strong institutions) may lead multinational firms to respond to stakeholder demands through increased CSR activity. Therefore, media restriction may increase the conflicts between firms and their stakeholders. As a result, I predict that firms with high exposure to countries where media freedom is low may extract concessions from stakeholders by engaging in earnings management. Second, Engelberg and Parsons (2011) find that local media coverage plays a more effective role in sharing information and is more accurate in forecasting local trading. As such, under higher media restriction, there may be fewer local media channels spreading information about foreign markets to investors. Thus, I propose that outside investors may encounter challenges in verifying information about firms that export a considerable share of their sales to countries with low media freedom. Consequently, these firms might take advantage of such a situation to engage in earnings management, and corporate misconduct is likely to occur.

To test these hypotheses, following Krause et al. (2016) and Berger et al. (2017), I construct a firm-level index that captures the sales-weighted media restriction[1] in a firm's export markets relative to the United States, using country-level data on media restriction from Freedom House and data on foreign sales of US firms from the COMPUSTAT Historical Segment database. Since media freedom is the same for all US firms, focusing on the sales-weighted media restriction ensures that exposure to countries with low media freedom is the primary driver of media restriction. I find that firms are more likely to engage in accrual-based earnings management when they have a high fraction of sales in countries with low media freedom. The effect is economically substantial. I also demonstrate that financial and digital media freedom affect earnings management. Specifically, using hand-collected country-level data on document counts of articles that cover both market and corporation news from Factiva, I show a positive relationship between financial media restriction and earnings management. Next, given the increasing importance of digital media, I investigate whether digital media freedom impacts earnings management. The result indicates that firms engage in more earnings management when their trading countries have low digital media freedom. This finding is consistent with

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[1] In this paper, I use the concepts media freedom and media restriction interchangeably.

the hypothesis that firms take advantage of media restriction to engage in earnings management. I also show that the impact of traditional and digital media freedom on earnings management is of comparable importance.

This investigation, however, is still vulnerable to endogeneity concerns. For example, the decision to sell in a certain country is not random. Firms may jointly choose to trade in countries with restricted media while engaging in earnings management (self-selection bias). Alternatively, media freedom may be correlated with other unobservable characteristics that affect earnings management (omitted variable bias). Therefore, to partially alleviate these concerns, I employ different approaches.

I first focus on a sample of firms with a change in the media freedom category of trading partners. Specifically, I examine earnings management across a set of firms with no change in a sales relationship and at least one trading country that experienced a change in their media freedom status. In general, Freedom House changes a country's media freedom status when there is a change in attacks against journalists such as harassment, physical violence, and death threats, or when there is an exogenous impact on independent media ownership. Thus, the status change itself reflects the change in media freedom of a country rather than other factors. I find that firms with a negative change in the media freedom of their foreign partners engage more in accrual-based earnings management, whereas firms experiencing a positive change in media freedom do not engage in earnings management. Hence, the results based on this test support my baseline findings.

The second test is based on the change in the efficiency of access to foreign information for US investors, with the introduction of a new product of Dow Jones News Services, namely *NewsPlus*, as in Dai et al. (2020), as a source of variation to identify how the quality of media affects earnings management. In particular, the launch of the *NewsPlus* platform introduces more powerful search tools and more quickly updated news about foreign markets, which, in turn, grants US investors better access to foreign information provided by Dow Jones branches around the world. This analysis relies on Dyck et al.'s (2008) argument that foreign media can partially disseminate information about countries with low media freedom. Moreover, as hypothesized, when firms have a high share of sales in countries with low media freedom, US domestic investors face challenges to verify information about foreign segments and external barriers to US firms. Hence, the overall quality of the information about foreign markets would improve after the launch of *NewsPlus*. I find that, after the launch of the service, the effect of media restriction on earnings management is less pronounced. This result implies that the improvement in media information quality results in a reduction in earnings management.

Next, I identify potential economic mechanisms underlying the link between media restriction of international markets and earnings management. First, my results show that the effect of media freedom in foreign product markets on earnings management depends on how US domestic investors process information about firm export markets. Specifically, I document that firms with a large share of sales in countries with low media freedom manage earnings: (1) when their foreign partners are not close to the United States, (2) when the main national language of their foreign product markets is not English, (3) when foreign partners do not share a common culture with the United States, or (4) when the fraction of institutional investors is low. Second, I explore whether the presence of a more diverse stakeholder base of multinational firms is a potential reason why firms take advantage of media restriction. Indeed, I find that multinational firms engage more in earnings management to mislead: (1) shareholders and debtholders, when firms need to access external capital; (2) competitors, when firms operate in a competitive market; or (3) other stakeholders, when firms have more CSR concerns. These findings are consistent with the predictions that a restricted media may increase conflicts between multinational firms and their stakeholders, and thus may make firms exploit such situations to mislead their stakeholders by engaging in earnings management.

Furthermore, additional tests focusing on firms' subsidiaries show that multinational firms engage in earnings management, especially when they operate in countries with low media freedom. Moreover, I investigate whether analysts covering US firms and international analysts following foreign product markets moderate the effect of media restriction on earnings management. The results show that the presence of analysts in foreign countries reduces the incentives of firms to exploit media restriction to manipulate earnings. Hence, as an alternative information intermediary, financial analysts may play a role in moderating the effect of media restriction in foreign product markets on earnings

management. Finally, I find that media restriction increases opportunities for insiders to trade on non-public information. Firm insiders with a higher percentage of sales in countries with low media freedom benefit not only from their insider purchases but also from sales transactions. Together, these results suggest that media restriction can result in a higher probability of corporate misconduct as managers may take advantage of media restriction to engage in both earnings management and opportunistic insider trading.

In the final section, I add a set of robustness tests. First, to substantiate the conclusion and to further understand whether the result could apply to firms of other countries, I hand-collect segment reporting data from annual reports of FTSE 350 and European blue-chip non-financial firms and then re-estimate the main baseline model. I find that the relationship between media restriction and earnings management remains unchanged. These results corroborate and confirm the main findings based on the US sample. These additional results suggest that media freedom is a factor that can explain firms' engagement in earnings management not only in the United States but also in other countries. Second, I include an additional measure of media freedom from Reporters Without Borders and measures of state ownership of the media from Djankov et al. (2003) to address how media freedom affects earnings management. I show that my main result is robust to alternative media freedom proxies. Following these tests, I show that the result holds when I apply the one-step procedure of Chen et al. (2018) to identify total accrual earnings management and when I use alternative measures of accrual-based earnings management, including the Dechow et al. (1995), McNichols (2002) and Kothari et al. (2005) models.

Overall, the findings enhance the understanding of the influences of media freedom on corporate outcomes. The results of this paper bring together two strands of research. First, a growing literature on media freedom has shown that independent media could lower corruption in bank lending (Houston et al., 2011), enhance firms' information environment (Berger et al., 2017; J.-B. Kim et al., 2017), affect firms' operating efficiency (You et al., 2018), reduce corporate tax aggressiveness (Kanagaretnam et al., 2018), and improve CSR (El Ghoul et al., 2019). My paper contributes to the literature by showing that media freedom based on exposure to countries with media restriction affects corporate misconduct, such as earnings management and opportunistic insider trading. Furthermore, I find that media freedom in the foreign product markets of multinational firms can partly explain firms' engagement in earnings management not only in the United States but also in other countries. Therefore, this study adds to previous literature by showing the effect of media freedom and firm activities at both firm and country levels. Additionally, unlike previous studies on media freedom and firm activities, I expand the analysis of media freedom by looking at financial media freedom and show a relationship between financial media freedom and earnings management. Moreover, I also find evidence that domestic investors' information processing and the presence of a wide set of stakeholders in multinational firms play important roles in explaining how exposure to foreign product markets affects corporate outcomes.

This study also adds to the literature on the spill-over effect of institutional characteristics of foreign product markets on firm headquarters. By focusing on the geographic concentration of sales, demand-side cultural variance, and industry context, Krause et al. (2016) show that firms may adjust their corporate governance characteristics to match those of the foreign product market's culture. Brammer et al. (2006) and Attig et al. (2016) also document that multinational firms increase CSR investment to respond to stakeholder demands. My study contributes to this literature by showing that multinational firms may affect corporate misconduct to extract concessions from their stakeholders once they have a large share of sales in countries with low media freedom. In a study closely related to this paper, Dyreng, Hanlon, et al. (2012) show that firms with foreign operations in countries with a weak rule of law engage more in earnings management. However, my paper differs from theirs in two ways. First, I focus not only on media restriction of foreign product markets but also on the country in which firms are incorporated or headquartered. By doing this, my results highlight how the difference in social norms between firms and their partners affects corporate misconduct. Second, I show that free media may act as a channel to reduce conflicts of interest between multinational firms and their stakeholders, and thus may affect the need to use earnings management to adjust relationships with stakeholders.

The remainder of this paper proceeds as follows. Section 2 develops hypotheses. Section 3 describes my sample and the data. Section 4 reports and discusses my main empirical results, while Sections 5 and 6 present economic mechanisms and additional analyses. Section 7 shows robustness checks, and Section 8 concludes.

2 | LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 | Related literature

Previous studies on media freedom have shown the impact of media independence on the financial system and firms' information environment. Particularly, a lack of independent media increases levels of bank corruption (Houston et al., 2011) and the likelihood of tax aggressiveness (Kanagaretnam et al., 2018). Moreover, J. -B. Kim et al. (2017) and Berger et al. (2017) argue that freedom for the media to fully disseminate collected information to capital markets enhances the information environment. Specifically, these studies find that low media independence weakens the ability to generate firm-level transparency, creates opportunities for firms to adjust their disclosures, and makes analyst forecasts less accurate. Therefore, a lack of media independence could lead to information asymmetry and lower market efficiency. From an external corporate mechanism perspective, You et al. (2018) compare news articles written by state-controlled and market-oriented Chinese media and show the accuracy and stronger corporate monitoring role of market-oriented media. Taken together, media freedom is an important institutional characteristic that enhances media quality and introduces the possibility of external monitoring.

2.2 | Hypothesis development

Prior literature on earnings management demonstrates that although accrual-based earnings management is based purely on accounting choices or methods, it is more likely to draw auditors' or regulatory scrutiny (Cohen et al., 2008; Graham et al., 2005). Therefore, firms are likely to manage earnings where there is limited attention from markets or regulators. Additionally, as a mechanism to disseminate local information to non-local market participants, Engelberg and Parsons (2011) find that local media coverage plays a more effective role in sharing information and is more accurate in forecasting local trading. Moreover, if local media is restricted and controlled by other parties, information distributed through local media may be biased. Hence, when multinational firms have a high share of sales in countries with low media freedom, managers could take advantage of the media restriction, allowing them to escape scrutiny. As a consequence, I argue that domestic investors could have difficulties verifying information about firm activities and understanding foreign barriers to multinational firms. As a result, managers might engage in earnings management.

Besides, firms may use earnings management to mislead stakeholders about firm performance or to affect contractual outcomes that rely on accounting information (Healy & Wahlen, 1999). Previous literature indicates that firms in a more diverse stakeholder environment may adjust their activities when they expand their geographical operations to accommodate stakeholders' demands. For example, multinational firms tend to invest more in CSR activities as a strategic response to stakeholder demands (Attig et al., 2016; Brammer et al., 2006) or to change their corporate governance structure to compete with their foreign competitors (Krause et al., 2016). Therefore, multinational firms may use earnings management to shape their relationship, not only with capital providers but also with other stakeholders. For instance, these multinational firms may alter financial reports to mislead shareholders and debtholders when they raise capital from markets (Bharath et al., 2008; Rangan, 1998; Shivakumar, 2000; Teoh et al., 1998), or to compete with local and foreign competitors when proprietary costs are high (Markarian & Santalo, 2014; Shi et al., 2018), or to extract concessions from local and foreign employees, from local and foreign governments, and from other stakeholders (Y. Kim et al., 2012). Further, multinational firms enhance their relationship with stakeholders by engaging in CSR

activities, especially when they have many subsidiaries in countries with strong political and legal institutions (Attig et al., 2016). Thus, free media, as an indicator of a strong institutional environment, may act as a mechanism to reduce conflicts between multinational firms and their stakeholders, and thus impede incentives to mislead stakeholders via the use of earnings management.

Therefore, it is a valid concern that if multinational firms have a high share of sales in countries with low media freedom, managers could engage in earnings management to exploit the non-transparent information or to extract concessions from stakeholders. As a consequence, I hypothesize these firms could be more prone to corporate misconduct and engaging in earnings management.

3 | DATA, SAMPLE, AND MEASURES

3.1 | Data and sample selection

The initial sample consists of all firms available in the Execucomp database for the period 1998 to 2016. I exclude financial firms (SIC 6000–6999) and utility firms (SIC 4900–4999). The sample starts from 1998 because since December 1997, under SFAS 131, firms have been required to disclose more information about segments if revenues or assets from external customers attributed to each individual foreign country are material. To obtain data about geographic segments, I use the COMPUSTAT Historical Segment database to retrieve the information. Accounting information is from COMPUSTAT and stock prices are from the Center for Research in Security Prices (CRSP).

3.2 | Measures of media restriction

First, following the similar approach of Krause et al. (2016), I identify net sales to each individually disclosed country at the end of each financial year because information on net sales is one of the most complete data fields provided in the COMPUSTAT Historical Segment. Under SFAS 131, there is no particular requirement about standard formats for classifying countries, which leads to different names for the same countries in firms' reports. To increase the precision and consistency of segment information, I manually check each listed country in each firm and recode names of these countries. For example, "UK," United Kigdom," "United Kingdom," "Great Britain," "U.K.," "England," "United Kingdom (UK)," and "British" are all recoded as the United Kingdom. Additionally, for a firm year with no disclosure for any individual foreign country, sales to foreign markets are set to zero. Further, a group of countries, regions, or continents is also set as zero.[2]

In the second step, I calculate the difference in media restriction between each trading country and the United States by using the reports on Freedom of the Press from all available countries on the Freedom House website. Each country is scored on a numerical scale from 0 to 100, with higher values indicating lower media freedom. In other words, this index represents the media restriction of a country. Also, each country is placed in a group of free (score from 0 to 30), partly free (score from 31 to 60), or not free media (score above 60).[3]

Then, I construct two measures of media freedom in firms' export markets based on these two inputs. The first measure is employed similar to the approach of Krause et al. (2016) and Berger et al. (2017), by multiplying the percentage of each firm's sales trading with specific countries with the difference in media freedom between foreign and

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[2] For example, if firms disclose "Europe" or "Asia," I set this disclosure as zero. If firms disclose a group of countries, such as "Asia Pacific" or "Canada and United Kingdom," I also set this information as zero.

[3] In the paper, I scale this score by 100 to easily interpret the results.

US markets as follows:

$$Media\ restriction_{it} = \sum_{j=1}^{n} \frac{S_{ijt}}{TS_{it}} \times (R_{it} - R_{0t}) \tag{1}$$

where $Media\ restriction_{it}$ is the sales-weighted media restriction of firm i's export markets in year t; S_{ijt} is sales of firm i to major customers in country j in year t; TS_{it} represents total sales of firm i in a given year t; R_{jt} is media restriction in country j in year t; and $R_{0,t}$ is the US media restriction in year t. Thus, a higher value of $Media\ restriction$ indicates a low media freedom environment.

The second measure is the percentage of sales made in different media freedom groups (only considering countries with non-missing individual country names in the COMPUSTAT Segment Files). $Sales\ to\ free\ media_{it}$ is the percentage of sales in free media countries, $Sales\ to\ partly\ free\ media_{it}$ is the percentage of sales in partly free media countries and $Sales\ to\ non\text{-}free\ media_{it}$ is the percentage of sales in non-free media countries.

Table 1 summarizes the percentage of foreign sales of firms from 1998 to 2016. On average, sales to individual countries account for 8.2% of total sales during the sample period.[4] Also, for those firms disclosing non-zero foreign sales, the average sales to foreign countries are approximately about 22.9%. Furthermore, on average, foreign sales increase monotonically, from 2.6% in 1998 to about 10.4% in 2016. This pattern is also similar to the percentage of foreign sales for firms with positive individual disclosure sales, which increases from 13.5% in 1998 to 24.8% in 2016.

Further, Table 1 also presents the summary statistics for the percentage of foreign sales to countries in each category of media freedom. During the period from 1998 to 2016, average sales to countries with free media freedom account for a more substantial proportion of total sales (5.5%), compared to sales to countries with partly free media (0.8%) and non-free media (1.8%). For firms with positive individually disclosed foreign sales, sales to free media countries account for 15.9%, with 2.1% and 4.9% of sales, respectively, accounting for partly free media countries and non-free media countries.

3.3 | Measure of earnings management

To construct a measure of accrual-based earnings management, I employ Owens et al.'s (2017) method and include idiosyncratic shocks ($Idio\_shock$) to Kothari et al.'s (2005) model. Additionally, as in Collins et al. (2017), I further add sales growth to the model to adjust for the effect of firm growth. The estimate is calculated separately for each two-digit SIC industry-year group, using all observations for each two-digit SIC industry-year group with available data on the COMPUSTAT database. Based on previous empirical estimates for earnings management, I only take into account industry-year groups with at least 10 observations.

The normal level of accruals for each industry-year pair:

$$\frac{TA_{it}}{A_{it-1}} = \lambda_0 + \lambda_1 \frac{1}{A_{it-1}} + \lambda_2 \frac{(\Delta REV_{it} - \Delta AR_{it-1})}{A_{it-1}} + \lambda_3 \frac{PPE_{it}}{A_{it-1}} + \lambda_4 \frac{NI_{it}}{A_{it-1}} + \lambda_5 \frac{(Sales_{it} - Sales_{it-1})}{A_{it-1}} + \lambda_6\ Idio\_shock_{it} + \varepsilon_{it} \tag{2}$$

where TA is the total accruals, defined as the difference between net income and cash flow from operations; A is the total assets; ΔREV is the change in revenues; ΔAR is the change in accounts receivables; PPE is the gross property, plant, and equipment; NI is income before extraordinary items; $Sales$ is annual firm sales and $Idio\_shock$ is an idiosyncratic shock measure as in Owens et al. (2017), which is the firm-specific stock return variation in years t and $t - 1$, calculated as the mean squared error of the residuals from a regression of monthly firm returns on monthly industry and market returns. The absolute value of the residuals from these regressions is used as a measure for accrual-based management ($Earnings\ management$).

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[4] This is relatively comparable to the percentage of goods exported accounted for in US GDP for 1998 and 2016 reported by the US Census Bureau.

TABLE 1 Percentage of foreign product markets

Year	All firms				Firms with disclosed foreign sales			
	All	Sales to free media	Sales to partly free media	Sales to non-free media	All	Sales to free media	Sales to partly free media	Sales to non-free media
1998	0.026	0.025	0.001	0.000	0.137	0.131	0.006	0.000
1999	0.060	0.051	0.004	0.005	0.187	0.158	0.014	0.015
2000	0.066	0.054	0.006	0.006	0.198	0.160	0.016	0.017
2001	0.065	0.055	0.004	0.004	0.200	0.174	0.012	0.014
2002	0.065	0.055	0.003	0.007	0.207	0.169	0.014	0.024
2003	0.069	0.056	0.005	0.008	0.208	0.170	0.014	0.024
2004	0.077	0.060	0.005	0.012	0.223	0.174	0.014	0.035
2005	0.080	0.061	0.005	0.014	0.224	0.171	0.015	0.038
2006	0.082	0.062	0.006	0.014	0.228	0.171	0.017	0.040
2007	0.089	0.065	0.007	0.017	0.244	0.177	0.020	0.047
2008	0.088	0.061	0.009	0.018	0.241	0.168	0.024	0.049
2009	0.092	0.060	0.010	0.022	0.257	0.167	0.029	0.061
2010	0.095	0.056	0.011	0.028	0.263	0.155	0.031	0.077
2011	0.098	0.057	0.013	0.028	0.268	0.154	0.036	0.078
2012	0.101	0.058	0.013	0.030	0.271	0.153	0.035	0.083
2013	0.102	0.058	0.012	0.032	0.262	0.149	0.030	0.083
2014	0.102	0.057	0.012	0.033	0.260	0.146	0.030	0.084
2015	0.099	0.055	0.011	0.033	0.249	0.139	0.028	0.082
2016	0.106	0.058	0.011	0.037	0.246	0.135	0.026	0.085
1998–2016	0.081	0.056	0.008	0.017	0.232	0.160	0.022	0.050
Observations	19,085				6641			

Note: Table 1 reports the percentage of sales to countries in different categories of media freedom for non-financial Standard and Poor's 1500 (S&P 1500) firms from 1998 to 2016. *All* is the percentage of disclosed foreign sales. *Sales to free media* is the percentage of sales to free media countries, *Sales to partly free media* is the percentage of sales to partly free media countries; *Sales to non-free media* is the percentage of sales to non-free media countries.

3.4 | Control variables

Following the previous empirical studies about the determinants of accrual-based earnings management (Ali & Zhang, 2015; Y. Kim et al., 2012), a set of control variables is added to the main regressions: Firm size (*Size*)–natural logarithm of total assets, growth opportunities–market-to-book ratio (*MTB*), operational performance–return on assets (*ROA*), and leverage (*Leverage*)–Long-term debt over total assets.

Additionally, media freedom is associated with country-level economic growth and helps to transmit information to market investors. Therefore, I include additional country-level control variables to alleviate this concern. First, I add *GDP growth*, *Ln(GDP)*, and *CPI* to control for the time-varying macroeconomic characteristics related to the financial development and economic growth of customers' countries. Country-level control variables are collected from the World Development Indicators website.

Moreover, Gentzkow et al. (2006) suggest that media freedom could reduce and deter the value-destroying activities that firms are unwilling to voluntarily report, including corruption and fraud. Also, prior studies by Leuz et al. (2003) and McLean et al. (2012) show that the quality of country corporate governance has direct effects on corporate policies, operational environment, and structure. Hence, I construct the sales-weighted average country governance index (*CG index*).[5] Based on Karolyi and Taboada (2015), the country governance index is based on the first principal component of five composite governance indicators: control of corruption, government effectiveness, rule of law, regulatory quality, and political stability. Further, following previous literature about the relationship between tax and earnings management (Dyreng, Hanlon, et al., 2012), I add the tax haven indicator of foreign trading partners as a control variable.

Summary statistics of the main and control variables are reported in Table 2. The detailed definitions of the variables are described in the Appendix. Also, panel B of Table 2 presents the correlation matrix between variables used in the regressions. The correlation between *Media restriction* and accrual-based earnings management is positive and statistically significant.[6]

4 | EMPIRICAL RESULTS

4.1 | Freedom of the press and earnings management

4.1.1 | Baseline findings

I investigate the relationship between freedom of the press and earnings management based on the following model:

$$Y_{i,j,k,t} = \alpha + \beta \, Media \, Restriction_{i,t} + \gamma Z_{1,i,t} + \theta Z_{2,i,t} + a_{k,t} + \varepsilon_{i,j,k,t} \qquad (3)$$

where $Y_{i,j,k,t}$ (or *Earnings management*$_{i,j,k,t}$) is accrual-based earnings management of firm *i* that has sales in a number of countries *j* in industry *k* in year *t*. *Media Restriction*$_{i,t}$ is the proxy for media freedom. $Z_{1,i,t}$ is a vector of controls for firm characteristics. $Z_{2,j,t}$ is a vector of controls for foreign product market characteristics. $a_{k,t}$ controls for industry-year fixed effects. Industry-year fixed effects are included to control for industry characteristics and overall macroeconomic factors changing in a certain year. Industries are based on two-digit SIC codes. I also use robust standard errors clustered at the firm level (Petersen, 2009).

Results are presented in Table 3. Across all columns, I find a significant positive relationship between exposure to countries with low media freedom and accrual-based earnings management, after controlling for firm and foreign

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[5] I rescale the indices by dividing them by 10 and transforming them to be non-negative data.

[6] Further, the coefficients between dependent variables are relatively low and the absolute value of the highest coefficient is 0.566. Thus, there are no concerns of multicollinearity.

TABLE 2 Summary statistics and correlation matrix

(a) Panel A: summary statistic

All firms	N	Mean	Median	Q1	Q3	Std. dev.
Media restriction	19,085	0.013	0.000	0.000	0.001	0.052
Sales to non-free media	19,085	0.017	0.000	0.000	0.000	0.079
Sales to partly free media	19,085	0.008	0.000	0.000	0.000	0.043
Sales to free media	19,085	0.056	0.000	0.000	0.070	0.114
Earnings management	19,085	0.042	0.029	0.013	0.056	0.044
Size	19,085	7.188	7.080	6.028	8.271	1.644
MTB	19,085	3.158	2.310	1.460	3.750	3.765
ROA	19,085	0.039	0.053	0.017	0.091	0.111
Leverage	19,085	0.182	0.155	0.009	0.283	0.186
Price pattern$_{purcharses}$	8084	1.098	1.055	0.979	1.164	0.239
Shares traded$_{Purcharses}$	8084	0.001	0.000	0.000	0.000	0.002
Price pattern$_{Sales}$	12,542	0.963	0.970	0.924	1.000	0.100
Shares traded$_{Sales}$	12,542	0.005	0.002	0.000	0.005	0.012

(Continues)

TABLE 2 (Continued)

(a) Panel A: summary statistic

Firms with positive individually disclosed foreign sales

	N	Mean	Median	Q1	Q3	Std. dev.
Media restriction	6641	0.038	0.004	0.001	0.030	0.083
Sales to non-free media	6641	0.050	0.000	0.000	0.008	0.128
Sales to partly free media	6641	0.022	0.000	0.000	0.000	0.071
Sales to free media	6641	0.160	0.123	0.061	0.224	0.143
Earnings management	6641	0.041	0.029	0.013	0.055	0.042
Size	6641	7.442	7.401	6.313	8.496	1.599
MTB	6641	2.982	2.259	1.478	3.617	3.238
ROA	6641	0.039	0.053	0.017	0.090	0.108
Leverage	6641	0.176	0.159	0.020	0.268	0.166
GDP growth	6641	1.634	1.318	0.513	2.556	2.070
Ln(GDP)	6641	0.491	0.000	0.000	1.000	0.500
CPI	6641	1.250	0.907	0.346	1.803	1.607
CG Index	6641	0.345	0.306	0.162	0.510	0.216
Tax haven	6641	0.130	0.000	0.000	0.000	0.336
Price pattern$_{purchases}$	2261	1.095	1.055	0.983	1.156	0.238
Shares traded$_{Purchases}$	2261	0.001	0.000	0.000	0.000	0.002
Price pattern$_{Sales}$	4419	0.964	0.973	0.930	1.000	0.082
Shares traded$_{Sales}$	4419	0.005	0.001	0.000	0.005	0.010

(Continues)

TABLE 2 (Continued)

(b) Panel B: correlation matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Media restriction	1													
(2) Sales to non-free media	0.961	1												
(3) Sales to partly free media	0.311	0.107	1											
(4) Sales to free media	0.011	−0.047	0.014	1										
(5) Earnings management	0.073	0.066	−0.021	0.046	1									
(6) Size	−0.052	−0.039	0.014	−0.124	−0.193	1								
(7) MTB	−0.020	−0.009	−0.079	−0.048	0.081	0.083	1							
(8) ROA	−0.044	−0.037	−0.034	−0.033	−0.069	0.200	0.211	1						
(9) Leverage	−0.068	−0.065	0.039	−0.121	−0.094	0.244	−0.033	−0.133	1					
(10) GDP growth	0.166	0.184	−0.098	−0.252	0.031	−0.045	0.047	0.043	0.0436	1				
(11) Ln(GDP)	−0.421	−0.366	−0.288	−0.193	−0.001	−0.032	0.047	0.018	−0.005	0.070	1			
(12) CPI	0.002	0.002	0.066	−0.273	−0.022	−0.008	−0.081	−0.003	0.129	0.301	0.069	1		
(13) CG Index	−0.292	−0.252	−0.226	−0.323	0.001	−0.020	0.049	0.018	0.057	0.326	0.651	0.279	1	
(14) Tax haven	0.298	0.287	0.174	0.173	0.030	−0.070	−0.015	−0.039	−0.054	−0.107	−0.266	−0.143	−0.350	1
Observations	6641													

Note: Table 2 shows descriptive statistics and a correlation matrix between all variables using in the main regressions based on a sample of S&P1500 firms from 1998 to 2016. Panel A reports the descriptive statistics. *Media restriction* is the sales-weighted of the difference in media freedom between foreign and US markets; *Sales to free media* is the percentage of sales to free media countries; *Sales to partly free media* is a percentage of sales to partly free media countries; *Sales to non-free media* is a percentage of sales to non-free media countries. Panel B demonstrates the correlation matrix. *Media restriction* is the sales-weighted of the difference in media freedom between foreign and US markets; *Sales to free media* is the percentage of sales to free media countries of individually disclosed foreign sales firms; *Sales to partly free media* is a percentage of sales to partly free media countries; *Sales to non-free media* is a percentage of sales to non-free media countries. All variables are defined in detail in the Appendix.

TABLE 3 Freedom of the press and earnings management

	(1)	(2)	(3)	(4)
Media restriction	0.030***		0.040***	
	(3.23)		(3.24)	
Sales to non-free media		0.021***		0.026***
		(3.54)		(3.29)
Sales to partly free media		−0.008		−0.004
		(−0.86)		(−0.40)
Sales to free media		−0.001		0.004
		(−0.25)		(0.78)
Size	−0.004***	−0.004***	−0.003***	−0.003***
	(−9.89)	(−9.87)	(−4.86)	(−4.81)
MTB	0.001***	0.001***	0.001***	0.001***
	(6.93)	(6.90)	(2.96)	(2.95)
ROA	−0.031***	−0.031***	−0.022**	−0.022**
	(−5.10)	(−5.11)	(−2.08)	(−2.09)
Leverage	−0.007**	−0.007**	−0.004	−0.004
	(−2.10)	(−2.11)	(−0.60)	(−0.58)
GDP growth			−0.061	−0.061
			(−1.60)	(−1.61)
Ln(GDP)			0.001	0.000
			(0.35)	(0.12)
CPI			−0.012	0.003
			(−0.19)	(0.05)
CG Index			0.005	0.005
			(0.95)	(1.04)
Tax haven			−0.001	−0.001
			(−0.47)	(−0.49)
Constant	0.068***	0.068***	0.063***	0.062***
	(24.57)	(24.71)	(11.63)	(10.93)
Observations	19,085	19,085	6641	6641
Adjusted R^2	0.147	0.147	0.118	0.118
Industry × Year FE	Yes	Yes	Yes	Yes

Note: Table 3 presents results from regressions examining the relationship between freedom of the press and earnings management. The dependent variable is *Earnings management*, which is accrual-based earnings management measured based on Owens et al.'s (2017) and Collins et al.'s (2017) methods. *Media restriction* is the sales-weighted average of the difference in media freedom between the United States and foreign countries; *Sales to free media* is the percentage of sales to free media countries; *Sales to partly free media* is the percentage of sales to partly free media countries; *Sales to non-free media* is the percentage of sales to non-free media countries. All variables are defined in detail in the Appendix. Industry dummies are based on two-digit SIC codes. *t-statistics* are reported in parentheses below parameter estimates. Robust standard errors are clustered at the firm level.

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

product market characteristics. In columns 1 and 2, I report the results for the relationship between media restriction of firms' export markets and earnings management for all available firms, including firms without foreign sales. Column 3 is the baseline model, which focuses on firms disclosing information about their foreign product markets. Column 4 shows the relationship between the percentage of sales in each media freedom category and earnings management. In general, the coefficient of *Media restriction* and *Sales to non-free media countries* are positive and statistically significant at the 1% level. Further, based on the estimate in column 3 of Table 3, a one standard deviation increase in *Media restriction* increases accrual-based earnings management by approximately 4.3% of the sample mean. This is economically significant. For example, Dyreng, Mayew, et al. (2012) and Liu (2016) find that a one standard deviation increase in religious adherence and corruption culture in their respective samples increases accrual-based earnings management by 2.3% of the mean. Overall, this result suggests that managers are more likely to manage earnings through income-increasing activities when firms have a high fraction of sales in countries with low media freedom.

4.1.2 | Financial and digital media freedom

The above results show the effect of media freedom in general. In this section, I investigate how financial and digital media freedom affect accrual-based earnings management.

First, previous literature suggests that financial media is a main channel to disseminate information about companies and markets. Griffin et al. (2011) show that financial media helps explain stock price reactions much better in developed than in emerging markets. It should nonetheless be noted that in some countries, the financial media may not exist or be of sufficient importance. To address this concern, following Griffin et al. (2011), I measure the importance of financial media based on hand-collected country-level data on document counts of news articles about international markets and corporations by using keywords "commodity/financial market news" and "corporate/industrial news" in the subject of Factiva news archived from January 1998 to December 2016 for 113 countries in the sample. Specifically, as a proxy for financial media freedom in each country, I use the ratio of articles about capital markets and corporates (firms) to the total number of articles in each country and construct the sales-weighted average of these ratios. Additionally, the quality of financial news may vary across countries and news sources. Also, more sophisticated journalists may focus more on particular value-relevant news. Therefore, I further construct another proxy for financial media freedom based on the fraction of articles from reputable international business news sources (The Wall Street Journal, Financial Times, Dow Jones Newswires, and Reuters) that cover both markets and corporate news and construct the sales-weighted average of these fractions.[7] Since these two proxies are inversely correlated with media restriction, I multiply these proxies by minus one to be comparable with the *Media restriction* variable.

The results reported in columns 1 to 3 of Table 4 show the effects of financial media freedom on earnings management. The main independent variable in column 1 is a firm's overall financial media restriction, *FINRES*. I find that the coefficient on this financial media restriction variable is positive and significant at the 5% level. In columns 2 and 3, I decompose the *FINRES* variable into two groups: *FINRES_Market* and *FINRES_Corporate*, representing the financial media restriction in market and corporate news, respectively, and find that the coefficients of these two proxies are positive and significant at the 5% level. Finally, in columns 4 to 6, I focus on the quality of financial news based on the ratio of financial articles from reputable international business news sources (The Wall Street Journal, Financial Times, Dow Jones Newswires, and Reuters) to the total number of articles. In column 4, I find that the coefficient on *REP_FINRES* is positive and significant, suggesting that firms with a high fraction of sales in countries with fewer articles covered by reputable business sources are likely to engage in earnings management.

Next, I also look at additional proxies for financial journalist sophistication. The result in column 5 shows that the coefficient on *REP_FINRES_Market* is significant and positive. Notably, the coefficient on *RE_FINRES Corporate* has a magnitude of 0.026 and is significant at the 10% level. Overall, the results in Table 4 suggest that firms with

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[7] This measure is also a proxy for journalism quality as in Griffin et al. (2011).

TABLE 4 Financial media freedom and earnings management

	(1)	(2)	(3)	(4)	(5)	(6)
FINRES	0.002**					
	(2.00)					
FINRES$_{Market}$		0.002**				
		(1.98)				
FINRES$_{Corporate}$			0.009**			
			(2.00)			
REP_FINRES				0.006*		
				(1.95)		
REP_FINRES$_{Market}$					0.007**	
					(1.99)	
REP_FINRES$_{Corporate}$						0.026*
						(1.72)
Size	−0.004***	−0.004***	−0.004***	−0.004***	−0.004***	−0.004***
	(−4.92)	(−4.92)	(−4.94)	(−4.93)	(−4.92)	(−4.96)
MTB	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***
	(3.07)	(3.07)	(3.07)	(3.07)	(3.07)	(3.08)
ROA	−0.022**	−0.022**	−0.022**	−0.022**	−0.022**	−0.022**
	(−2.13)	(−2.13)	(−2.13)	(−2.13)	(−2.13)	(−2.13)
Leverage	−0.005	−0.005	−0.005	−0.005	−0.005	−0.005
	(−0.65)	(−0.65)	(−0.64)	(−0.65)	(−0.65)	(−0.65)
GDP growth	−0.011	−0.011	−0.011	−0.009	−0.009	−0.010
	(−0.26)	(−0.26)	(−0.27)	(−0.22)	(−0.23)	(−0.24)
Ln(GDP)	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000
	(−0.12)	(−0.12)	(−0.17)	(−0.14)	(−0.13)	(−0.23)
CPI	0.003	0.003	0.000	0.001	0.002	−0.005
	(0.05)	(0.05)	(0.01)	(0.01)	(0.02)	(−0.07)
CG Index	0.006	0.006	0.005	0.006	0.006	0.005
	(1.09)	(1.10)	(1.01)	(1.06)	(1.07)	(0.98)
Tax haven	−0.002	−0.002	−0.001	−0.001	−0.001	−0.001
	(−0.65)	(−0.65)	(−0.56)	(−0.58)	(−0.61)	(−0.40)
Constant	0.063***	0.063***	0.064***	0.064***	0.063***	0.064***
	(11.65)	(11.63)	(11.79)	(11.73)	(11.70)	(11.92)
Observations	6641	6641	6641	6641	6641	6641
Adjusted R^2	0.116	0.116	0.115	0.115	0.115	0.115
Industry × Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Note: Table 4 reports results from regressions examining the relationship between financial news freedom and earnings management. The dependent variable is *Earnings management*, which is accrual-based earnings management measured based on Owens et al.'s (2017) and Collins et al.'s (2017) methods. *FINRES* is the sales-weighted average of the fraction of financial news in foreign countries; *FINRES*$_{Market}$ is the sales-weighted average of the fraction of financial news about markets and commodities in foreign countries; *FINRES*$_{Corporate}$ is the sales-weighted average of the fraction of corporates news in foreign countries;

(Continues)

TABLE 4   (Continued)

REP_FINRES is the sales-weighted average of the fraction of the reputable international business news sources: The Wall Street Journal, Financial Times, Dow Jones Newswires, and Reuters in foreign countries; *REP_FINRES*$_{Market}$ is the sales-weighted average of the fraction of market and commodity news, which is covered by the reputable financial news sources in foreign countries; *REP_FINRES*$_{Corporate}$ is the sales-weighted average of the fraction of corporate news, which is covered by the reputable financial news sources in foreign countries. All variables are defined in detail in the Appendix. Industry dummies are based on two-digit SIC codes. *t-statistics* are reported in parentheses below parameter estimates. Robust standard errors are clustered at the firm level.
*, **, ***indicate the significance level at 1%, 5%, and 10%, respectively.

a high percentage of sales to countries with restrictions to financial media freedom engage more in accrual-based earnings management. Hence, financial media freedom could play a potentially important role in impeding earnings management.

Besides financial media, freedom in digital media is also important to consider. Given that the role of digital media has increased, Stahl and Sully de Luque (2014) conclude that digital media can enhance information transparency, which, in turn, keeps stakeholders informed about firm activities. Additionally, Price et al. (2011) indicate the importance of separately investigating the role of "new media" when examining a country's media freedom, as some countries may apply different regulations for old and new media. Therefore, in this section, I follow El Ghoul et al. (2019) by looking at freedom of the internet as a proxy for new media and examine the association between the freedom of new media and earnings management.[8] I expect that when a firm has a high share of sales in countries with highly restricted digital media, this firm is more likely to engage in earnings management. Table 5 shows evidence consistent with this expectation.

In columns 1 and 2, I regress the digital media restriction measures on earnings management with different sets of control variables. I find that the coefficients on *Net restriction* are positive and statistically significant at 5% or better. This finding suggests that firms engage more in earnings management when they have a high fraction of sales in countries with low digital media freedom. Columns 3 and 4 show the relationship between sales to different groups of countries and earnings management. I find that the coefficient on *Sales to non-free net* is positive and statistically significant. Moreover, the coefficient on *Sales to free net* is negative and significant. Hence, these results show that firms engage more in earnings management when they have high exposure to trading partners with low digital media freedom, whereas these firms tend to lower earnings management when they trade more with countries where the freedom in digital media is high.

In columns 5 and 6, I investigate the effect of both traditional and new media restrictions on earnings management. As in El Ghoul et al. (2019), I take the residuals from the regression of the press restriction on the net restriction and add them to the regressions with net restriction. Hence, the variables of interest in columns 5 and 6 are *Net restriction* and *Residual press restriction*.[9] I find that the coefficient on *Net restriction* is positive and significant at 1%. The coefficient on the residual net restriction is also positive and significant at 1%. Moreover, the magnitudes of the two coefficients are similar. Overall, the results in Table 5 suggest that both traditional and digital media freedom affect earnings management, and both have a comparable effect on earnings management.

4.2 | Endogeneity tests

One concern that might affect the main result in this paper is that the choice to trade with foreign partners may not be random. Firms with a high probability of engaging in earnings management can self-select to trade in a country with

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[8] Data on freedom of the net is available from 2011. Hence, I focus on a sample from 2011 to 2016.

[9] In these tests, since I use the residuals from the regression of the press restriction on the net restriction, to reduce measurement errors, I use the sales-weighted average of net restriction indices of trading partners.

TABLE 5 Digital media freedom and earnings management

	(1)	(2)	(3)	(4)	(5)	(6)
Net restriction	0.011***	0.012**			0.016***	0.015***
	(4.01)	(2.24)			(4.67)	(3.93)
Residual press restriction					0.024***	0.021***
					(3.15)	(2.78)
Sales to non-free net			0.021***	0.021**		
			(3.71)	(1.99)		
Sales to partly free net			0.006	−0.003		
			(0.59)	(−0.28)		
Sales to free net			−0.014**	−0.014*		
			(−2.21)	(−1.72)		
Size	−0.003***	−0.002**	−0.003***	−0.002**	−0.003***	−0.002***
	(−6.55)	(−2.27)	(−6.50)	(−2.20)	(−9.46)	(−3.08)
MTB	0.000**	0.000	0.000**	0.000	0.000***	0.000
	(2.42)	(0.93)	(2.30)	(0.60)	(3.67)	(1.00)
ROA	−0.001	0.003	−0.002	0.002	−0.001	0.003
	(−0.08)	(0.18)	(−0.17)	(0.13)	(−0.22)	(0.31)
Leverage	−0.004	−0.004	−0.005	−0.003	−0.005	−0.005
	(−1.14)	(−0.62)	(−1.22)	(−0.57)	(−1.52)	(−0.84)
GDP growth		−0.039		−0.101		−0.053
		(−0.63)		(−1.48)		(−0.81)
Ln(GDP)		0.001		0.001		0.000
		(0.26)		(0.34)		(0.14)
CPI		−0.034		−0.051		−0.042
		(−0.48)		(−0.72)		(−0.52)
CG Index		0.005		0.002		0.005
		(0.85)		(0.28)		(0.73)
Tax haven		0.002		0.002		0.001
		(0.64)		(0.84)		(0.56)
Constant	0.057***	0.045***	0.058***	0.049***	0.057***	0.045***
	(17.04)	(7.16)	(17.14)	(6.86)	(23.15)	(9.69)
Observations	5320	2075	5320	2075	5320	2075
Adjusted R^2	0.094	0.051	0.095	0.054	0.096	0.056
Industry × Year FE	Yes	Yes	Yes	Yes	Yes	Yes
H_0: Net restriction = Residual press restriction						
F-test					2.18	1.07
Prob > F					0.140	0.300

Note: Table 5 reports results from regressions examining the relationship between digital media freedom and earnings management. The dependent variable is *Earnings management*, which is accrual-based earnings management measured based on

(Continues)

TABLE 5 (Continued)

Owens et al.'s (2017) and Collins et al.'s (2017) methods. *Net restriction* is the sales-weighted average of the difference in digital media freedom between foreign and US markets from columns 1 to 4 and is the sales-weighted of digital media freedom indices in columns 5 and 6; *Residual press restriction* is the residual from the regression of the press restriction on the net restriction; *Sales to free net* is the percentage of sales to free digital media countries; *Sales to partly free net* is the percentage of sales to partly free digital media countries; *Sales to non-free net* is the percentage of sales to non-free digital media countries. All variables are defined in detail in the Appendix. Industry dummies are based on two-digit SIC codes. *t-statistics* are reported in parentheses below parameter estimates. Robust standard errors are clustered at the firm level.

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

low media freedom in alignment with their strategies. Alternatively, the media freedom of foreign product markets and earnings management could be jointly determined by unobservable firm characteristics. Therefore, in this section, I use different approaches to partially alleviate these concerns.

4.2.1 | Using a sample of firms trading with countries that experienced a change in media freedom

First, I examine the earnings management activities for a set of firms that have at least one partner that switched from high to low free media and low to high media freedom. Moreover, in this sub-test, I only investigate firms that have no change in sales relationship or no new sales relationship with other countries during my sample period.

In general, Freedom House changes a country's media freedom status when there is a change in attacks against journalists such as harassment, physical violence, and death threats, or when there is an exogenous impact on independent media ownership. Thus, the change of status itself reflects changes in media freedom or quality of news revealed by media within the country.

Particularly, since firms trade with many countries within a year, I manually read and check foreign sales to identify changes in trading partners. Panel A of Table 6 presents the regression results. The results based on the subsample of firms with changes from high to low media freedom in their foreign trading partners reported in columns 1 and 2 of panel A show that the proxies for media freedom (*Media restriction* and *Sales to non-free media*) are statistically significant and positive with accrual-based earnings management. Conversely, as in columns 3 and 4, I find that firms with a positive change in media freedom do not engage in accrual-based earnings management. This finding implies that when there is a switch from high to low media freedom from firms' trading partners, managers can take advantage of such situation to engage more in accrual-based earnings management, which supports my baseline findings.

4.2.2 | Using a difference-in-differences analysis

The results thus far provide evidence that the media freedom of foreign customers influences firms' earnings management, which was tested with subsamples of firms whose foreign product partners experienced a change in media freedom. To further mitigate possible identification issues, I attempt to strengthen my inferences by using a source of variation in the information quality.

Particularly, Dyck et al. (2008) state that foreign media can partially disseminate information about countries with low media freedom. Therefore, in this subsection, I use the changes in the efficiency of access to foreign information for US firms–the introduction of a new product of Dow Jones News Services in 2003, namely, *NewsPlus*. This is a platform designed to facilitate the speed of access to thousands of daily news articles. Specifically, *NewsPlus* introduces features such as providing more powerful search tools to navigate news stories and sort news based on subscribers' demands, including updated references and financial market overviews with customizable filters (Dai et al., 2020). As a result,

TABLE 6 Endogeneity tests

(a) Panel A: endogeneity tests using a sample of firms with foreign trading partners having a change in media freedom				
	Change from high to low		Change from low to high	
	(1)	(2)	(3)	(4)
Media restriction	0.060*		0.002	
	(1.84)		(0.02)	
Sales to non-free media		0.038**		0.020
		(1.98)		(0.34)
Sales to partly free media		−0.009		0.010
		(−0.48)		(0.21)
Sales to free media		0.034		0.058
		(1.55)		(0.86)
Size	−0.004**	−0.004**	0.004	0.004
	(−2.35)	(−2.45)	(1.00)	(1.12)
MTB	0.002	0.002	0.018***	0.017***
	(0.82)	(0.93)	(4.53)	(4.56)
ROA	−0.008	−0.012	−0.094	−0.127
	(−0.32)	(−0.47)	(−0.84)	(−1.13)
Leverage	0.000	0.007	0.091	0.075
	(0.02)	(0.28)	(1.17)	(0.98)
GDP growth	0.285	0.364	−0.557	−0.471
	(1.38)	(1.60)	(−0.56)	(−0.39)
Ln(GDP)	−0.011	−0.010	0.019	0.032
	(−1.16)	(−1.07)	(0.69)	(0.99)
CPI	0.159	0.221	0.200	0.487
	(0.58)	(0.75)	(0.31)	(0.64)
CG Index	−0.038*	−0.033	−0.140	−0.135
	(−1.80)	(−1.51)	(−1.22)	(−1.06)
Tax haven	−0.002	−0.001	0.042***	0.042***
	(−0.31)	(−0.08)	(2.89)	(2.78)
Constant	0.063***	0.055***	−0.029	−0.049
	(3.76)	(3.14)	(−0.82)	(−1.01)
Observations	145	145	39	39
Adjusted R^2	0.082	0.077	0.661	0.646
(b) Panel B: endogeneity tests using difference-in-differences analysis				
		(1)		(2)
Media restriction		0.121***		
		(4.67)		
Media restriction × Post		−0.086***		
		(−3.16)		

(Continues)

TABLE 6 (Continued)

(b) Panel B: endogeneity tests using difference-in-differences analysis		
	(1)	**(2)**
Sales to non-free media		0.068***
		(4.23)
Sales to non-free media × Post		−0.045***
		(−2.62)
Sales to partly free media		0.020
		(0.85)
Sales to partly free media × Post		−0.022
		(−0.86)
Sales to free media		0.011
		(−0.95)
Sales to free media × Post		−0.008
		(−0.62)
Size	−0.004***	−0.004***
	(−7.67)	(−7.50)
MTB	0.002***	0.002***
	(8.45)	(8.49)
ROA	−0.030***	−0.031***
	(−4.16)	(−4.22)
Leverage	−0.011**	−0.012**
	(−2.26)	(−2.29)
GDP growth	−0.085**	−0.084*
	(−2.00)	(1.94)
Ln(GDP)	0.000	−0.000
	(0.05)	(−0.19)
CPI	−0.052	−0.040
	(−0.80)	(−0.60)
CG Index	0.007	0.008
	(1.20)	(1.37)
Tax haven	−0.004*	−0.004*
	(−1.73)	(−1.74)
Constant	0.070***	0.069***
	(16.16)	(14.27)
Observations	3937	3937
Adjusted R²	0.126	0.124
Industry × Year FE	Yes	Yes

Note: Table 6 reports results from regressions examining the relationship between media freedom and earnings management addressed endogeneity issues. Panel A reports results from an endogeneity test using a sample of firms with foreign partners having a change in media freedom status. A firm is classified into this sample when that firm does not have changes in trading

(Continues)

TABLE 6 (Continued)

countries but at least one trading country having a switch in its status from high (low) to low (high) media freedom. The dependent variable is *Earnings management*, which is accrual-based earnings management measured based on Owens et al.'s (2017) and Collins et al.'s (2017) methods. *Media restriction* is the sales-weighted average of the difference in media freedom between foreign and US markets; *Sales to free media* is the percentage of sales to free media countries; *Sales to partly free media* is the percentage of sales to partly free media countries; *Sales to non-free media* is the percentage of sales to non-free media countries. Panel B shows the effects of Dow Jones News Service on the relationship between media freedom and earnings management. The dependent variable is *Earnings management*, which is accrual-based earnings management measured based on Owens et al.'s (2017) and Collins et al.'s (2017) methods. *Media restriction* is the sales-weighted average of the difference in media freedom between foreign and US markets; *Sales to free media* is the percentage of sales to free media countries; *Sales to partly free media* is the percentage of sales to partly free media countries; *Sales to non-free media* is the percentage of sales to non-free media countries; *Post* is an indicator that takes the value of one if year *t* is after the introduction of *NewsPlus* service. All variables are defined in detail the Appendix. Industry dummies are based on two-digit SIC codes. *t-statistics* are reported in parentheses below parameter estimates. Robust standard errors are clustered at the firm level.
*, **, ***indicate the significance level at 1%, 5%, and 10%, respectively.

since the launch of the *NewsPlus* platform, Dow Jones News provides US investors with more information on foreign product markets.[10] As hypothesized, when a firm has a high fraction of sales in countries with low media freedom, US domestic investors face challenges to verify information about foreign segments as well as foreign barriers to the US firms. Consequently, after the implementation of the new platform, media quality improved, and information about foreign product markets is more transparent. Therefore, this new platform could reduce the earnings management of firms that were able to hide from scrutiny more easily before the introduction of *NewsPlus*. In other words, there would be a negative relationship between the media restriction of foreign product markets and accrual-based earnings management post-*NewsPlus*.

To conduct this test, I focus on a subsample with treatment and control groups that are constructed based on a propensity score matching procedure between firms in the top and bottom quartiles of exposure to countries with low media freedom, to ensure that treatment and control groups are similar pre-event. I use *Post* as an indicator variable that takes the value of one if year *t* is after 2003 and zero otherwise. The results are presented in panel B, Table 6. I find that the positive impact of exposure to countries with low media freedom and accrual-based earnings management becomes less pronounced after the introduction of the *NewsPlus* platform. In particular, the interaction terms *Media restriction × Post* and *Sales to non-free media × Post* are negative and statistically significant at the 1% level. This result suggests that after the introduction of the new platform, the quality of media has become significantly stronger, which makes firms exposed to countries with low media freedom reduce their accrual-based earnings management.

Collectively, after controlling for some potential endogeneity concerns, my main findings suggest that media freedom plays a role in reducing firm earnings management.

5 | ECONOMIC MECHANISMS

My main findings so far show that firms with a large share of sales in countries with low media freedom engage in accrual-based earnings management. In this section, I extend the main analysis by showing possible economic mechanisms through which media freedom of foreign product markets could affect accrual-based earnings management. My results show that the effect of media freedom in foreign product markets on earnings management depends on how US domestic investors process foreign information and how multinational firms shape their relationship with stakeholders.

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[10] See also https://www.businesswire.com/news/home/20030326005075/en/Dow-Jones-Newswires-Launches-DowJones-NewsPlus

5.1 | US domestic investors process foreign information

First, I explore channels through which US domestic investors may encounter challenges in accessing information about foreign product markets. Table 7 reports these results.

In particular, I investigate whether the geographic distance of trading partners affects information processing. Anderson and Van Wincoop (2003) show that geographic distance influences the trade activities of firms. Moreover, US analysts located close to firms' headquarters issue more precise earnings forecasts (Malloy, 2005). Therefore, from US investors' point of view, information about countries that are closer to the United States (e.g., Canada or Mexico) would be more transparent and easier to access than information about countries that are farther away (e.g., the Philippines or South Africa). Hence, if media freedom in foreign countries affects US domestic investors' information processing, I expect the effect of media freedom to be more salient in the subsample with a higher share of sales in countries that are far from the United States. Following Ahern et al. (2015), I calculate the geographic distance between capitals using the great circle formula. A firm is categorized as being in a far subsample if the sales-weighted average of geographic distance is above the median. In contrast, if a firm is below the median, I classify that firm into the close subsample. Columns 1 and 2 of Table 7 present the results. Consistent with my expectation, the finding indicates that media restriction affects earnings management in the subsample with a large fraction of countries farther away from the United States. By contrast, media restriction does not exert a statistically significant effect on earnings management in the subsample where partners are closer to the US firms.

Next, I focus on the language barrier between US investors and foreign countries. I hypothesize that US investors may encounter difficulties in obtaining relevant information about foreign product markets because of the language barrier in countries with low media freedom. This argument is based on Brochet et al. (2016) showing that conference calls of firms located in countries with a greater language distance from English are more likely to have non-plain English and erroneous expressions. A firm is classified into the English-speaking group if at least one trading partner uses English as the statutory national language. Columns 3 and 4 of Table 7 present the results. I find that the effect of media restriction on earnings management is statistically significant in subsamples of firms with a high language barrier: countries that do not use English as a national language.

Furthermore, as cultural distance increases, acquiring information about foreign markets becomes more difficult and expensive for headquarters (Roth & O'donnell, 1996). Therefore, I expect that media restriction has a stronger effect on earnings management when there is a high cultural distance between the United States and foreign product markets. Following Kogut and Singh (1988), I calculate the cultural distance between the foreign product markets and the United States using the Euclidean distance on the scores of Hofstede's dimensions. A firm is categorized in a high cultural distance subsample if the sales-weighted average of cultural distance is above the median. By contrast, if a firm is below the median, I classify that firm into the low cultural distance subsample. Columns 5 and 6 show that the coefficient *Media restriction* is positive and statistically significant in the high cultural distance subsample. Therefore, the result implies that media restriction is more likely to affect earnings management when the culture of foreign product markets is different from that of the United States.

Finally, institutional investors are more likely to have a better understanding of firm activities because they have more information (Bushee, 1998). As a result, the significant presence of institutional ownership could increase the probability of having more information about foreign product markets. Hence, the effect of media restriction on earnings management would be lower when the presence of institutional ownership is high. The results reported in columns 7 and 8 of Table 6 support my expectation. I find that the positive relationship between media restriction and earnings management is statistically significant at the 1% level when firms have a lower proportion of institutional ownership. This implies that institutional investors who have more information about firms may impede the effect of media restriction on earnings management.

Collectively, the findings in this section suggest that media freedom in foreign countries affects US domestic investors' information processing through which the media freedom of foreign product markets has an impact on accrual-based earnings management.

TABLE 7 Economic mechanisms: domestic investors' information processing and the effect of media freedom

	Geographic distance		English-speaking countries		Cultural distance		Institutional investors	
	Far	Close	Low	High	High	Low	Low	High
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Media restriction	0.057***	−0.015	0.054***	0.023	0.043**	0.136	0.068***	0.001
	(3.38)	(−0.54)	(3.25)	(0.96)	(2.57)	(1.18)	(3.57)	(0.04)
Size	−0.003***	−0.006***	−0.004***	−0.004***	−0.004***	−0.005***	−0.004***	−0.004***
	(−2.80)	(−3.80)	(−3.73)	(−2.92)	(−3.70)	(−3.11)	(−3.55)	(−3.39)
MTB	0.001***	0.001	0.001**	0.001	0.001**	0.001	0.001**	0.001
	(2.80)	(0.74)	(1.98)	(0.88)	(2.29)	(1.20)	(2.44)	(1.32)
ROA	−0.024*	−0.017	0.006	−0.054***	−0.017	−0.019	−0.011	0.002
	(−1.82)	(−0.78)	(0.35)	(−2.90)	(−1.22)	(−0.93)	(−0.58)	(0.09)
Leverage	−0.005	0.006	−0.007	0.017	0.007	−0.000	−0.016*	0.010
	(−0.48)	(0.33)	(−0.66)	(0.70)	(0.85)	(−0.00)	(−1.70)	(0.69)
GDP growth	−0.149**	0.052	−0.055	−0.102	−0.005	−0.123**	−0.050	−0.111*
	(−2.37)	(0.51)	(−1.12)	(−0.63)	(−0.07)	(−2.14)	(−0.47)	(−1.90)
Ln(GDP)	−0.001	−0.001	0.002	−0.004	0.001	0.003	0.005	0.001
	(−0.20)	(−0.23)	(0.81)	(−1.07)	(0.29)	(0.86)	(1.23)	(0.35)
CPI	0.016	−0.047	−0.013	0.035	−0.131	0.014	0.042	−0.029
	(0.11)	(−0.49)	(−0.14)	(0.20)	(−0.75)	(0.14)	(0.32)	(−0.29)
CG Index	0.015	0.007	0.002	0.018	−0.000	0.015*	0.001	0.005
	(1.48)	(0.62)	(0.31)	(1.38)	(−0.00)	(1.68)	(0.11)	(0.54)
Tax haven	−0.002	0.005	0.000	0.002	−0.002	0.013	−0.003	−0.000
	(−0.54)	(0.56)	(0.07)	(0.45)	(−0.86)	(0.96)	(−1.07)	(−0.02)
Constant	0.058***	0.077***	0.065***	0.069***	0.064***	0.066***	0.069***	0.066***
	(6.82)	(8.89)	(8.50)	(7.12)	(8.01)	(7.26)	(7.54)	(7.33)
Observations	3320	3321	3988	2653	3311	3330	2401	2439
Adjusted R^2	0.076	0.076	0.089	0.068	0.075	0.059	0.099	0.098
Industry × Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: Table 7 reports results from regressions examining how the information processing of domestic investors affects the relationship between media freedom and earnings management. The dependent variable is *Earnings management*, which is accrual-based earnings management measured based on Owens et al.'s (2017) and Collins et al.'s (2017) methods. *Media restriction* is the sales-weighted average of the difference in media freedom between foreign and US markets; *Geographic distance* is the sales-weighted average of the difference in the distance between the United States and foreign countries; *English-speaking countries* is the sales-weighted average of an indicator showing whether English is used as a national language in foreign countries; *Cultural distance* is the sales-weighted average of the difference in cultural distance between foreign product markets and the United States using Hofstede's dimensions; *Institutional Ownership* is the percentage of the institutional ownership. All variables are defined in detail in the Appendix. *t-statistics* are reported in parentheses below parameter estimates. Industry dummies are based on two-digit SIC codes. Robust standard errors are clustered at the firm level.
*, **, ***indicate the significance level at 1%, 5%, and 10%, respectively.

5.2 | The presence of different stakeholders of multinational firms

Additionally, Healy and Wahlen (1999) state that one of the main reasons why managers use earnings management is to mislead stakeholders. Given that multinational firms have a wide range of stakeholders, such as investors, creditors, communities, or employees (Detomasi, 2007), I hypothesize that multinational firms may manage earnings to shape their relationship with some stakeholders. Hence, in the following empirical analysis, I examine how shareholders, debtholders, competitors, and other stakeholders affect the relationship between media restriction and earnings management. Table 8 presents these results.

5.2.1 | Shareholders and debtholders

In modules 1 to 3, I first look at whether multinational firms use earnings management to mislead shareholders and debtholders when they have a high share of sales in countries with low media freedom. As noted in the prior literature, one of the incentives to mislead shareholders and debtholders through earnings inflation stems from the need to raise capital from markets (Bharath et al., 2008; Rangan, 1998; Shivakumar, 2000; Teoh et al., 1998). I, therefore, expect that firms are likely to take advantage of media restriction to engage in earnings management when they have a greater need for external financing. I proxy for capital issuance using an indicator variable (*Capital issuance*) that equals one if the firm has equity or debt issuance greater than or equal to 3% of market value in the following fiscal year and zero otherwise.[11] Column 1 presents the regression result. I find that the interaction term *Media restriction × Capital issuance* is positive and statistically significant at the 1% level. This suggests that media restriction has a higher impact on earnings management for firms with future financing activities. In columns 2 and 3, I further explore how each financing activity (*Equity issuance* and *Debt issuance*) affects the relationship between media restriction and earnings management. Column 2 shows that the coefficient on *Media restriction × Equity issuance* is positive and significant at the 1% level, which indicates that firms take advantage of media restriction to engage in earnings management when they issue more equity. Similarly, column 3 shows that the coefficient on the interaction *Media restriction × Debt issuance* is positive and statistically significant at the 5% level, supporting that firms with high media restriction engage in earnings management to mislead not only shareholders but also debtholders.

5.2.2 | Competitors

I next assess whether the effect of media restriction on earnings management varies systematically for firms under high competition pressure. Prior literature documents that managers have a greater incentive to misstate earnings via accrual-based methods when firms operate in a competitive market (Markarian & Santalo, 2014; Shi et al., 2018). Thus, if competition increases incentives to manage earnings, firms are likely to exploit media restriction to inflate earnings. I measure the intensity of product market competition with the Herfindahl–Hirschman Index (HHI). Since a higher HHI implies weaker competition, I multiply this index by minus one to identify competitive industries. Column 4 shows that the interaction term *Media restriction × Competition HHI* is positive and statistically significant. In column 5, I estimate competition based on the C4-Index as an additional competition index. The C4-index is based on the market shares of the four largest firms in an industry. I find that the interaction term *Media restriction × Competition C4* is positive and statistically significant. Overall, these results suggest that media restriction has a stronger impact on earnings management for firms facing high competition.

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[11] My results are robust to using the 5% of market value cut-off as in Cheng et al. (2016).

TABLE 8 Economic mechanisms: the presence of different stakeholders

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Media restriction	0.031***	0.034***	0.035***	0.046***	0.047***	0.068***	0.060***
	(2.62)	(2.70)	(2.89)	(2.87)	(3.01)	(3.40)	(3.57)
Capital issuance	0.005***						
	(2.73)						
Media restriction × Capital issuance	0.082***						
	(3.11)						
Equity issuance		0.022***					
		(5.40)					
Media restriction × Equity issuance		0.072**					
		(2.03)					
Debt issuance			−0.003				
			(−1.51)				
Media restriction × Debt issuance			0.084**				
			(2.47)				
CSR_STR				−0.001			
				(−0.72)			
Media restriction × CSR_STR				0.030			
				(0.83)			
CSR_CON					−0.001		
					(−0.72)		
Media restriction × CSR_CON					0.086**		
					(2.01)		
Competition HHI index						0.245	
						(1.59)	
Media restriction × Competition HHI index						0.541*	
						(1.90)	
Competition C4 index							0.294
							(1.51)
Media restriction × Competition C4 index							0.501*
							(1.86)
Constant	0.061***	0.060***	0.061***	0.026***	0.025***	0.078***	0.078***
	(5.34)	(5.36)	(5.40)	(2.09)	(1.96)	(5.19)	(5.22)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6641	6641	6641	6641	6641	6641	6641
Adjusted R^2	0.125	0.133	0.120	0.071	0.072	0.119	0.119
Industry × Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

(Continues)

TABLE 8   (Continued)

Note: Table 8 reports results from regressions examining how different stakeholders affect the relationship between media freedom and earnings management. The dependent variable is *Earnings management*, which is accrual-based earnings management measured based on Owens et al.'s (2017) and Collins et al.'s (2017) methods. *Media restriction* is the sales-weighted average of the difference in media freedom between foreign and US markets. *Capital issuance* is an indicator variable that equals one if a firm has equity or debt issuance greater than or equal to 3% of market value in the following fiscal year and zero otherwise. *Equity issuance* (or *Debt issuance*) is an indicator variable that equals one if a firm has equity (or debt) issuance greater than or equal to 3% of market value in the following fiscal year and zero otherwise. *CSR STR* (or *CSR CON*) is the total number of strengths (or concerns) of the community, diversity, employee relations, environment, human rights, and product characteristics qualitative issue areas. *Competition HHI index* (or *Competition C4 index*) is the Herfindahl–Hirschman Index at the three-digit SIC codes (or the sum of the market shares of the four largest firms in an industry) multiplied by minus one. All variables are defined in detail in the Appendix. Industry dummies are based on two-digit SIC codes. *t-statistics* are reported in parentheses below parameter estimates. Robust standard errors are clustered at the firm level.

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

5.2.3 | Other stakeholders

Besides capital providers and competitors, stakeholders of multinational firms also include customers, employees, governments, or communities. Given a variety of considerations and stakeholder demands in multinational firms, Attig et al. (2016) focus on firms' CSR scores and show that US multinational firms have higher CSR ratings when they operate in countries with strong institutional environments and strong legal and political institutions. As such, I expect that a more restricted media may impede the need to reduce conflicts between firms and other stakeholders, and thus may increase incentives for firms to extract concessions from stakeholders. To test this prediction, I use MSCI ESG STATS to obtain CSR scores and examine how CSR strengths *(CSR_STR)* and concerns *(CSR_CON)* affect the positive relationship between media restriction and earnings management.

Column 6 shows that the coefficient on *Media restriction* is still positive and statistically significant. The interaction term *Media restriction × CSR_STR* is positive but statistically insignificant. This finding suggests that firms with more CSR strengths are unlikely to exploit media restriction to manage earnings. This also supports the evidence of Attig et al. (2016) that multinational firms invest proactively in CSR strengths to protect the firm's reputation in response to stakeholder demands. However, I find, in column 7, that the interaction term *Media restriction × CSR_CONS* is positive and statistically significant. Hence, firms' CSR weaknesses, but not strengths, moderate the positive relation between media restriction and earnings management. This implies that media restriction may make firms with more irresponsible corporate behavior engage in earnings management, as doing so could mislead other stakeholders.

6 | ADDITIONAL ANALYSES

6.1 | Firms' subsidiaries and earnings management

Recent work further tests whether firms manage earnings at their headquarters or their subsidiaries and shows that headquarters affect subsidiary earnings management directly. For example, Beuselinck et al. (2018) show that corporate ultimate owners have a stronger influence on subsidiaries when these subsidiaries bear the same name as parents or when at least one parent board member sits on the board of the respective subsidiary. Also, firms are likely to manage earnings more in foreign subsidiaries because foreign subsidiaries are located far from the Securities and Exchange Comission (SEC) premises (Kedia & Rajgopal, 2011). Therefore, it is likely that it is easier to manage earnings when firms have subsidiaries in host countries with low media freedom. Hence, in this section, I focus on firms with extensive subsidiaries in countries with low media freedom.

TABLE 9 Press freedom and earnings management: Focusing on firms with disclosed subsidiaries

	(1)	(2)	(3)
Media restriction	0.042***	0.046***	0.046***
	(2.04)	(2.09)	(2.08)
Size	−0.005***	−0.005***	−0.005***
	(−3.57)	(−3.58)	(−3.56)
MTB	0.001	0.001	0.001
	(0.95)	(0.94)	(0.94)
ROA	−0.018	−0.018	−0.018
	(−1.08)	(−1.09)	(−1.09)
Leverage	0.005	0.004	0.004
	(0.28)	(0.23)	(0.23)
GDP growth		0.022	0.022
		(0.25)	(0.25)
Ln(GDP)		0.002	0.002
		(0.52)	(0.50)
CPI		0.026	0.025
		(0.20)	(0.19)
CG Index		0.003	0.003
		(0.34)	(0.34)
Tax haven		−0.000	−0.000
		(−0.02)	(−0.02)
Interlock			−0.012*
			(−1.69)
Constant	0.068***	0.063***	0.071***
	(8.15)	(8.22)	(8.20)
Observations	3539	3539	3539
Adjusted R^2	0.067	0.067	0.067
Industry × Year FE	Yes	Yes	Yes

Notes: Table 9 reports results from regressions examining the relationship between media freedom and earnings management, focusing on firms with disclosed subsidiaries. The dependent variable is *Earnings management*, which is accrual-based earnings management measured based on Owens et al.'s (2017) and Collins et al.'s (2017) methods. *Media restriction* is the sales-weighted average of the difference in media freedom between foreign and US markets; *Sales to free media* is the percentage of sales to free media countries; *Sales to partly free media* is the percentage of sales to partly free media countries; *Sales to non-free media* is the percentage of sales to non-free media countries. All variables are defined in detail in the Appendix. Industry dummies are based on two-digit SIC codes. *t-statistics* are reported in parentheses below parameter estimates. Robust standard errors are clustered at the firm level.

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

I identify the subsidiaries of firms based on SEC EDGAR Exhibit 21 as in Dyreng, Hanlon, et al. (2012). Additionally, to control for the subsidiary characteristics of firms, I follow Beuselinck et al. (2018) and include an indicator variable for the presence of interlocked directors. To do this, I read the profiles of board directors using the BoardEx database and then construct the indicator variable *Interlock* that takes the value of one if at least one board member sits on parent and subsidiary boards. Table 9 reports the results. In column 1, I regress the media restriction measures on

earnings management controlling for firm characteristics. The coefficient of *Media restriction* is positive and significant, with a value of 0.042, suggesting that firms engage more in earnings management when they have a high percentage of sales by subsidiaries located in countries with lower media freedom. In columns 2 and 3, I add a set of variables controlling for firm, country, and subsidiary characteristics. I find that *Media restriction* increases in magnitude to 0.046 and remains significant at the 5% confidence level. Hence, these results illustrate that it could be easier to manage earnings for firms with subsidiaries located in countries where the media has lower freedom, and the effect of media restriction on earnings management activities does not change after considering the subsidiary level.

6.2 | Role of the United States and foreign analysts

The above results show that information processing by domestic investors due to the restriction in the media's information disseminating role is a plausible channel affecting the engagement to manage earnings. However, together with the business press, financial analysts also act as financial intermediaries in capital markets. Analysts acquire essential information about firm activities from firm management through private communications (Brochet et al., 2014; Brown et al., 2015). Further, Yu (2008) finds that firms followed by more analysts are less likely to manipulate accrual-based earnings management; thus, analysts have an external governance role in impeding earnings management. Therefore, in this section, I will explore whether international analysts covering foreign product markets and analysts following US firms moderate the effect of media restriction on earnings management. To conduct this analysis, I focus on the interaction of media restriction with proxies for international and US analyst coverage.

Table 10 shows the results. First, I investigate the role of international analysts covering foreign product markets. I expect that firms may engage less in earnings management when there are more financial analysts covering their partner countries. Hence, I measure financial analysts at the country level based on the number of analysts covering firms in each country. In column 1, the coefficient on *Media restriction* remains positive and statistically significant at the 1% level. The coefficient on the interaction term *Media restriction × INTERNATIONAL_ANA* is negative and statistically significant. This finding implies that the presence of financial analysts in countries with low media freedom could reduce firms' incentives to engage in earnings management.

Further, in column 2, I explore whether US analysts moderate the effect of media restriction on earnings management. I find that the coefficient on the interaction term *Media restriction x US_ANA* is positive but statistically insignificant. Hence, domestic analysts may not act as an alternative channel to spread information about foreign product markets to capital markets. This is consistent with André et al. (2016), who find that firm analysts do not always understand information about segment disclosures.

6.3 | Opportunistic insider trading

In addition to earnings management, in this section, I examine the relationship between media freedom and opportunistic insider trading to further show how media freedom of foreign product markets affects the probability of having corporate misconduct. Liu (2016) shows that when insiders trade on non-public information for their private benefit, firms are more likely to have corporate misconduct. Opportunistic insider trading occurs when insiders trade on non-public information for their private benefit. Hence, under restricted media freedom, insiders could enrich their own benefit by trading on non-public information. I find that media restriction increases opportunities for insiders to trade on non-public information. Table 11 presents the relevant analysis.

Table 11 shows regression models for two dependent variables: a price pattern of insider purchases and insider sales. To identify whether insiders trade on non-public information, I calculate the proportion of market-adjusted gross return over the 20 days after the insider transaction and market-adjusted gross return over the 20 days before the insider transaction as in Liu (2016). This measure indicates that if insiders trade on private information through

TABLE 10 Freedom of the press and earnings management: The effect of analyst coverage

	(1)	(2)
Media restriction	0.252***	0.031*
	(2.80)	(1.74)
INTERNATIONAL_ANA	0.004	
	(0.56)	
Media restriction × INTERNATIONAL_ANA	−0.210**	
	(−2.23)	
US_ANA		0.003
		(1.38)
Media restriction × US_ANA		0.015
		(0.76)
Size	−0.004***	−0.004***
	(−4.56)	(−4.80)
MTB	0.001**	0.001***
	(2.15)	(2.81)
ROA	−0.020*	−0.021**
	(−1.74)	(−2.05)
Leverage	0.002	−0.005
	(0.21)	(−0.66)
GDP growth	−0.055	−0.058
	(−1.20)	(1.50)
Ln(GDP)	0.001	0.001
	(0.39)	(0.35)
CPI	−0.028	−0.016
	(−0.37)	(−0.26)
CG Index	0.007	0.005
	(1.21)	(0.97)
Tax haven	0.000	−0.001
	(0.07)	(−0.45)
Constant	0.062***	0.065***
	(7.11)	(11.33)
Observations	6641	6641
Adjusted R^2	0.099	0.119
Industry × Year FE	Yes	Yes

Note: Table 10 reports results from regressions examining how analyst coverage affects the relationship between media freedom and earnings management. The dependent variable is *Earnings management*, which is accrual-based earnings management measured based on Owens et al.'s (2017) and Collins et al.'s (2017) methods. *Media restriction* is the sales-weighted average of the difference in media freedom between foreign and US markets; *INTERNATIONAL_ANA* is the sales-weighted average of the number of analysts following foreign product markets; *US_ANA* is the number of analysts following US firms. All variables are defined in detail in the Appendix. Industry dummies are based on two-digit SIC codes. *t-statistics* are reported in parentheses below parameter estimates. Robust standard errors are clustered at the firm level.
*, **, ***indicate the significance level at 1%, 5%, and 10%, respectively.

TABLE 11 Freedom of the press and opportunistic insider trading

	Insider purchases		Insider sales	
	Price pattern	Price pattern	Price pattern	Price pattern
	(1)	(2)	(3)	(4)
Media restriction	0.248**		−0.049*	
	(2.43)		(−1.70)	
Sales to non-free media		0.115**		−0.033*
		(1.97)		(−1.88)
Sales to partly free media		0.051		0.038
		(0.58)		(1.26)
Sales to free media		−0.029		−0.002
		(−0.65)		(−0.14)
Size	−0.012***	−0.012***	0.006***	0.006***
	(−3.85)	(−3.94)	(5.44)	(5.44)
MTB	−0.000	−0.001	−0.000	−0.000
	(−0.32)	(−0.38)	(−0.92)	(−0.89)
ROA	−0.219***	−0.219***	−0.004	−0.004
	(−3.47)	(−3.48)	(−0.15)	(−0.17)
Leverage	0.042	0.041	−0.005	−0.005
	(1.25)	(1.21)	(−0.39)	(−0.40)
CPI	−0.004	−0.005	0.002	0.002
	(−1.26)	(−1.43)	(1.34)	(1.25)
GDP growth	−0.005**	−0.005*	0.002	0.002*
	(−2.02)	(−1.95)	(1.61)	(1.82)
Ln(GDP)	−0.006	−0.009	−0.003	−0.002
	(0.009)	(0.009)	(0.003)	(0.003)
CG index	0.086**	0.085**	0.003	0.001
	(−0.72)	(−1.06)	(−1.18)	(−0.64)
Tax haven	0.010	0.011	0.002	0.001
	(0.61)	(0.64)	(0.29)	(0.27)
Shares traded	0.076	0.087	0.016	0.014
	(0.46)	(0.53)	(0.17)	(0.15)
Constant	1.215***	1.252***	0.950***	0.936***
	(14.15)	(14.67)	(35.18)	(32.05)
Observations	2261	2261	4419	4419
Adjusted R^2	0.069	0.067	0.058	0.059
Industry × Year FE	Yes	Yes	Yes	Yes

Note: Table 11 reports results from regressions examining the relationship between media freedom and opportunistic insider trading. *Price Pattern* is the ratio of the market-adjusted gross return over 20 days after insider transactions and the market-adjusted gross return over 20 days before insider transactions; *Media restriction* is the sales-weighted average of the difference in media freedom between foreign and US markets; *Sales to free media* is the percentage of sales to free media countries; *Sales to partly free media* is the percentage of sales to partly free media countries; *Sales to non-free media* is the percentage of sales to

TABLE 11 (Continued)

non-free media countries; *Shares traded* is the number of shares traded divided by the number of shares outstanding. All variables are defined in detail in the Appendix. Industry dummies are based on two-digit SIC codes. *t-statistics* are reported in parentheses below parameter estimates. Robust standard errors are clustered at the firm level.
*, **, *** indicate the significance level at 1%, 5%, and 10%, respectively.

purchases, they will gain more after these transactions. In other words, the ratio should be higher for more favorable insider purchases. Conversely, this ratio should be lower for more favorable insider sales when insiders trade on non-public information.

To perform this analysis, I use data from the Thomson Reuters Insiders database to collect insider-trading data and focus on transactions with the cleansing code of either H or R that excludes option exercises. I also average the price pattern ratio across transaction days within a given year to have a firm-year price pattern ratio. Insiders used in my sample are all officers and directors.

I show in column 1 of Table 10 that the coefficient on media restriction is positive and statistically significant, suggesting that media restriction affects insiders' ability to profit from purchases via private information-based trades. Based on this estimate, a one standard deviation increase in media restriction on the price pattern ratio is associated with a rise of 1.10% in the price pattern. The effect of media restriction on the price pattern of insider purchases is economically meaningful. By way of comparison, Liu (2016) finds that a one standard deviation decrease in corporate corruption is associated with a reduction of 0.86% in the price pattern of insider purchases. Additionally, column 3 examines the relationship between media restriction and the price pattern of insider sales and shows a negative and statistically significant coefficient on media restriction, which suggests that insiders of these firms also benefit from their transactions.

Together with the results on earnings management, the evidence shows a fairly consistent picture, suggesting that firms with a large share of sales in countries with low media freedom take advantage of the low quality of media to engage in earnings management and opportunistic insider trading, which could increase the probability of corporate misconduct.

7 | ROBUSTNESS TESTS

7.1 | Extending to an international perspective

The results presented thus far suggest that US firms engage in earnings management when they have a high share of sales in countries with low media freedom. To substantiate this conclusion and to further understand whether the result could apply to firms of other countries, in this section, I obtain additional international samples and re-estimate the main baseline model. First, I focus on a sample consisting of non-financial firms that were constituents of the FTSE 350 between 1998 and 2016.[12] Second, I look at a sample of other non-financial European blue-chip companies from 2005 to 2016.[13] I hand-collected segment reporting data from the notes of annual reports obtained from the companies' websites and the Perfect Information Filings database. I further use COMPUSTAT Global for financial information and stock prices.

Panel A of Table 12 presents the results. In columns 1 and 2, I regress the media restriction measures on earnings management using the FTSE 350 sample with industry and year fixed effects. The coefficient of *Media restriction* is

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[12] Although this sample period covers three segment reporting regimes in the United Kingdom (SSAP 25, IAS 14R and IFRS 8), firms are only required to disclose geographical segments with the 10% materiality threshold in these three standards.

[13] European blue-chip companies were constituents of the ATX20, AEX25, CAC40, DAX30, MIB30, IBEX35, BEL20, OMXC25, OMX Helsinki 25, LUXX8, OMSX30 and OBX25. This sample starts from 2005 because all EU listed firms were required to adopt IFRS from 2005.

TABLE 12 Robustness tests

Panel A: Freedom of the press and earnings management: Using non-financial firms of the FTSE 350 and European blue-chips samples

	FTSE350				Other European blue-chips			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Media restriction	0.075***		0.086***		0.174***		0.147*	
	(2.86)		(2.80)		(2.62)		(1.95)	
Sales to non-free media		0.038*		0.065**		0.137**		0.152**
		(1.83)		(2.58)		(2.19)		(2.42)
Sales to partly free media		−0.072**		−0.006		0.137**		0.064
		(−2.07)		(−0.14)		(2.17)		(1.04)
Sales to free media		−0.004		0.014		−0.004		−0.004
		(−0.26)		(0.69)		(−0.17)		(−0.13)
Size	−0.005***	−0.005***	−0.005***	−0.005***	−0.006***	−0.006***	0.003	0.003
	(−3.58)	(−3.61)	(−3.22)	(−3.11)	(−2.63)	(−2.70)	(1.43)	(1.38)
MTB	0.008	0.008	0.011	0.011	−0.049	−0.027	0.039	0.060
	(1.09)	(1.07)	(1.03)	(1.03)	(−1.18)	(−0.63)	(0.85)	(1.30)
ROA	0.053*	0.053*	0.062	0.063	0.023	0.003	−0.025	−0.044
	(1.86)	(1.88)	(1.63)	(1.64)	(0.48)	(0.06)	(−0.57)	(−0.98)
Leverage	0.003	0.002	0.011	0.011	0.020	0.001	0.019	0.012
	(0.16)	(0.11)	(0.61)	(0.58)	(0.61)	(0.04)	(0.77)	(0.48)
GDP growth	−0.001	−0.001	−0.002	−0.003	−0.004	−0.004	−0.003	−0.005
	(−0.37)	(−0.25)	(−0.50)	(−0.77)	(−1.10)	(−1.16)	(−0.72)	(−1.24)

(Continues)

TABLE 12 (Continued)

Panel A: Freedom of the press and earnings management: Using non-financial firms of the FTSE 350 and European blue-chips samples

	FTSE350				Other European blue-chips			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ln(GDP)	0.006	0.002	−0.002	−0.005	0.008	0.012	0.007	0.011
	(0.87)	(0.28)	(−0.19)	(−0.66)	(0.95)	(1.35)	(0.80)	(1.26)
CPI	−0.001	0.001	−0.001	0.000	0.002	−0.002	0.001	−0.000
	(0.478)	(0.582)	(0.796)	(0.859)	(0.747)	(0.707)	(0.858)	(0.997)
CG Index	−0.004	0.026	0.044	0.029	−0.053	−0.040	−0.025	−0.014
	(−0.07)	(0.50)	(0.64)	(0.38)	(−1.28)	(−0.71)	(−0.66)	(−0.25)
Tax haven	0.042	0.069	0.072	0.077	−0.026	−0.098*	−0.041	−0.137**
	(0.63)	(0.98)	(0.90)	(0.96)	(−0.70)	(−1.72)	(−0.94)	(−2.22)
Constant	0.060***	0.060***	0.058***	0.057***	0.052**	0.057**	−0.047**	−0.044*
	(5.96)	(6.04)	(4.79)	(4.65)	(2.17)	(2.34)	(−2.01)	(−1.89)
Observations	1595	1595	1595	1595	361	361	361	361
Adjusted R^2	0.294	0.297	0.259	0.259	0.003	0.014	0.005	0.005
Industry FE	Yes	Yes	No	No	Yes	Yes	No	No
Year FE	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Industry × Year FE	No	No	Yes	Yes	No	No	No	No
Country	No	No	No	No	No	No	Yes	Yes

(Continues)

TABLE 12 (Continued)

Panel B: alternative media restriction variables						
	(1)	(2)	(3)	(4)	(5)	(6)
RWB Media restriction	0.011**			0.014**		
	(2.30)			(2.34)		
State Restriction 1		0.061**			0.062**	
		(2.18)			(1.99)	
State Restriction 2			0.060**			0.061**
			(2.24)			(2.06)
Size	−0.004***	−0.004***	−0.004***	−0.004***	−0.003***	−0.003***
	(−9.17)	(−7.86)	(−7.86)	(−4.67)	(−3.21)	(−3.21)
MTB	0.001***	0.001***	0.001***	0.001**	0.001	0.001
	(6.38)	(4.00)	(4.00)	(2.18)	(1.16)	(1.16)
ROA	−0.033***	−0.020***	−0.020***	−0.020*	−0.021	−0.021
	(−4.81)	(−2.91)	(−2.91)	(−1.75)	(−1.57)	(−1.57)
Leverage	−0.006	−0.002	−0.002	0.002	0.007	0.007
	(−1.41)	(−0.46)	(−0.46)	(0.19)	(0.53)	(0.53)

(Continues)

TABLE 12 (Continued)

Panel B: alternative media restriction variables

	(1)	(2)	(3)	(4)	(5)	(6)
GDP growth				−0.025	−0.044	−0.044
				(−0.53)	(−0.92)	(−0.93)
Ln(GDP)				−0.000	−0.001	−0.001
				(−0.14)	(−0.49)	(−0.49)
CPI				−0.020	0.005	0.005
				(−0.26)	(0.06)	(0.06)
CG Index				0.008	0.008	0.008
				(1.26)	(1.28)	(1.28)
Tax haven				0.000	0.002	0.002
				(0.13)	(0.52)	(0.52)
Constant	0.071***	0.066***	0.066***	0.067***	0.058***	0.058***
	(22.32)	(18.51)	(18.51)	(11.18)	(9.08)	(9.07)
Observations	19,085	13,830	13,830	6641	5090	5090
Adjusted R^2	0.134	0.094	0.094	0.097	0.056	0.056
Industry × Year FE	Yes	Yes	Yes	Yes	Yes	Yes

(Continues)

TABLE 12 (Continued)

Panel C: one-step regression on earnings management and alternative accrual-based earnings management measure

	(1) Total Accruals	(2) ABS Dechow	(3) ABS McNichols	(4) ABS Kothari
Media restriction	0.016*	0.064***	0.062***	0.050***
	(1.73)	(3.64)	(3.96)	(3.40)
Size	−0.001***	−0.003***	−0.003***	−0.004***
	(−2.12)	(−4.75)	(−3.70)	(−5.25)
MTB	−0.000	0.001***	0.002***	0.001**
	(−0.37)	(3.40)	(3.78)	(2.49)
ROA	0.733***	−0.168***	−0.200***	−0.027***
	(36.60)	(−12.34)	(−6.37)	(−2.25)
Leverage	0.000	−0.013**	−0.010	0.002
	(0.03)	(−1.99)	(−1.10)	(0.21)
GDP growth	−0.050	−0.086*	−0.074	−0.069
	(−1.48)	(−1.81)	(−1.45)	(−1.45)
Ln(GDP)	0.002	0.002	0.002	0.001
	(1.17)	(0.75)	(0.71)	(0.40)
CPI	0.019	0.043	−0.085	−0.030
	(0.44)	(0.54)	(−1.06)	(−0.40)
CG Index	−0.005*	0.006	0.011*	0.007
	(−1.72)	(0.99)	(1.68)	(1.15)

(Continues)

TABLE 12 (Continued)

Panel C: one-step regression on earnings management and alternative accrual-based earnings management measure

	(1) Total Accruals	(2) ABS Dechow	(3) ABS McNichols	(4) ABS Kothari
Tax haven	0.001	0.001	−0.001	−0.001
	(0.35)	(0.26)	(−0.20)	(−0.25)
1/AT(t-1)	0.249			
	(0.69)			
(Revt − Rect)/AT(t-1)	0.016**			
	(2.08)			
PPE/AT(t-1)	−0.021**			
	(−5.54)			
Constant	−0.001	0.075***	0.071***	0.071***
	(−0.19)	(13.77)	(11.08)	(11.84)
Observations	6548	6641	6641	6641
Adjusted R²	0.795	0.208	0.236	0.097
Industry × Year FE	Yes	Yes	Yes	Yes

Note: Table 12 shows robustness tests for the regression of earnings management on media freedom. Panel A shows results from regressions examining the relationship between media freedom and earnings management of non-financial FTSE350 firms from 1998 to 2016 and European blue-chip firms from 2005 to 2016. The dependent variable is *Earnings management*, which is accrual-based earnings management measured based on Owens et al.'s (2017) and Collins et al.'s (2017) methods. *Media restriction* is the sales-weighted average of the difference in media freedom between foreign and US markets. Panel B shows results from regressions examining the relationship between media freedom and earnings management using alternative media freedom proxies. The dependent variable is *Earnings management*, which is accrual-based earnings management measured based on Owens et al.'s (2017) and Collins et al.'s (2017) methods. *RWB Media restriction* is the sales-weighted average of the difference in media freedom developed by Reporters Without Borders; *State Restriction 1* is the sales-weighted average of percentage of state-owned newspapers out of the five largest daily newspapers (by circulation) in foreign countries; *State Restriction 2* is the sales-weighted average of the market share of state-owned newspapers out of the aggregate market share of the five largest daily newspapers (by circulation) in foreign countries. Panel C shows results from regressions examining the relationship between media freedom and earnings management: Column 1 shows the one-step regression to identify accrual-based earnings management as in Chen et al. (2018); columns 2 to 4 show alternative measures based on the Dechow et al. (1995), Kothari et al. (2005), and McNichols (2002). All variables are defined in detail in the Appendix. Industry dummies are based on two-digit SIC codes. *t-statistics* are reported in parentheses below parameter estimates. Robust standard errors are clustered at the firm level.

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

positive and significant at the 1% level, with a value of 0.072, suggesting that, as for US firms, EU and UK firms with a high percentage of sales to countries with lower media freedom engage more in earnings management. Further, I also find that the coefficient on *Sales to non-free media* is positive and statistically significant. In columns 3 and 4, I include industry-times-year fixed effects with a set of control variables. Here, the coefficient of *Media restriction* is 0.115 and significant at the 1% confidence level. Also, the coefficient on *Sales to non-free media* is positive and statistically significant at 5%. Finally, in columns 5 to 8, I show the analysis of other European blue-chip companies with industry and year fixed effects (columns 5 and 6) and with country and year fixed effects (columns 7 and 8). I find that the coefficients on *Media restriction* are positive and significant at 5%. Also, the coefficients on *Sales to non-free media* are positive and significant at 5%. Therefore, using samples of UK firms and other European blue-chip firms, I find that firms with a high percentage of sales in countries with low media freedom are more likely to engage in earnings management. These results corroborate and confirm the main findings based on the US sample of the baseline results. Overall, these additional results suggest that media freedom is a factor that can explain firms' engagement in earnings management not only in the United States but also in other countries. These findings also add to the previous international literature on the effect of media freedom and firm activities using cross-country samples. For example, El Ghoul et al. (2019) use a sample of firms from 42 countries and suggest that firms in countries with high media freedom engage more in CSR activities. J. -B. Kim et al. (2017) examine a sample of firms from 52 countries and find a positive relationship between the information environment proxied by analyst forecast errors and a lack of media freedom.

7.2 | Alternative media proxies

Next, I check whether the findings are driven by the choice of the media restriction measure. Therefore, I replicate my baseline model using alternative media freedom indicators. Panel B of Table 11 illustrates the results. In columns 1 and 4, I use the Press Freedom Index from Reporters without Borders as an alternative source of media freedom. In columns 2 and 5, I use the percentage of state-owned newspapers among the five largest daily newspapers in each foreign country (*State Restriction 1*), collected from Djankov et al. (2003). Finally, I estimate media restriction using the market share of state-owned newspapers scaled by the total market share of the five largest daily newspapers (*State Restriction 2*) in models 3 and 6. I find that the coefficient on the alternative media restriction proxies is positive and statistically significant, confirming that the main finding is robust to the choice of media freedom proxies.

7.3 | Alternative earnings management measures

In this section, I corroborate the main result using alternative proxies for earnings management. Specifically, I tested this with a one-step procedure and alternative measures of accrual-based earnings management (panel C of Table 12).

Column 1 shows the measure with total accruals using the one-step procedure as in Chen et al. (2018). Columns 2 to 4 show my replication of the baseline regressions using the absolute value of the discretionary accruals calculated following Dechow et al. (1995), McNichols (2002), and Kothari et al. (2005). I find that the coefficient of *Media restriction* remains positive and statistically significant in all these regressions. Overall, the results in panel C of Table 12 show that the association between media freedom and earnings management is robust to alternative earnings management measures.

8 | CONCLUSION

When the capital market realizes opportunistic insider activities, it may result in negative market consequences such as a higher cost of capital (Aboody et al., 2005). The media plays a role in disseminating news to the market,

monitoring firm activities, and reducing conflicts between firms and their stakeholders. Therefore, it is crucial to look at the relationship between the quality of media and corporate misconduct.

In this paper, I examine the effect of media freedom on earnings management and opportunistic insider trading using the sales-weighted average of the difference in media restriction of a firm's export market. When firms are exposed to countries with higher media restriction than the headquarter country, managers are more likely to take advantage of the low quality of the press and engage in earnings management activities and opportunistic insider trading. These results are robust to multiple identification strategies and alternative measures of earnings management and media freedom. The effect of exposure to countries with high media restriction on corporate misconduct depends on how domestic investors process foreign information and how firms shape their relationship with their stakeholders. My paper adds to the literature on the relation between media freedom and firm activities. The paper sheds new light on the relationship between financial media freedom and financial reporting activities. This paper also contributes to the literature on the spill-over effect of institutional characteristics of product markets on firms headquartered in the United States by showing that the media freedom of foreign product markets has an impact on corporate misconduct, regardless of whether there are subsidiaries in those markets. Finally, the media freedom of foreign product markets is a factor that can explain the engagement of firms in earnings management not only in the United States but also in other countries.

DATA AVAILABILITY STATEMENT

Research data not shared.

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APPENDIX
VARIABLE DEFINITIONS

Variable	Definition	Source
Earnings management variable		
Earnings management	The absolute value of the residual of the abnormal accruals estimation based on Owens et al.'s (2017) and Collins et al.'s (2017) methods	COMPUSTAT
Opportunistic insider trading		
Price pattern	The proportion of market-adjusted gross return over 20 days after insider transactions and market-adjusted return over 20 days before insider transactions	Thomson Reuters Insiders

(Continues)

Variable	Definition	Source
Media freedom variable		
Media restriction	The sales-weighted average of the difference in media freedom between foreign and US markets	COMPUSTAT Freedom House
Sales to non-free media	The percentage of sales to free media countries	COMPUSTAT Freedom House
Sales to partly free media	The percentage of sales to partly free media countries	COMPUSTAT Freedom House
FINRES	The sales-weighted average of the fraction of financial articles in foreign countries	Factiva
$FINRES_{Market}$	The sales-weighted average of the fraction of all financial articles that cover news about markets in foreign countries	Factiva
$FINRES_{Corporate}$	The sales-weighted average of the fraction of all financial articles that cover corporate news in foreign countries	Factiva
REP_FINRES	The sales-weighted average of the fraction of articles from reputable international business news sources: The Wall Street Journal, Financial Times, Dow Jones Newswires, and Reuters	Factiva
REP_FINRES_{Market}	The sales-weighted average of the fraction of market and commodity news, which is covered by reputable international business news sources	Factiva
$REP\_FINRES_{Corporate}$	The sales-weighted average of the fraction of corporate news, which is covered by reputable international business news sources	Factiva
Firm control variables		
Size	The natural logarithm of total assets	COMPUSTAT
MTB	Market-to-book, measured as the market value of equity divided by book value of equity	COMPUSTAT
Leverage	Long-term debt over total assets.	COMPUSTAT
ROA	Return on total assets, calculated as income before extraordinary items divided by total assets	COMPUSTAT
Country control variables		
GDP growth	The sales-weighted average of the change in GDP of foreign countries	World Bank
Ln (GDP)	The sales-weighted average of the natural logarithm of GDP per capita of foreign countries	World Bank
CPI	The sales-weighted average of the consumer price index of foreign countries	World Bank
CG Index	Country Governance Index: The sales-weighted average of country World Bank governance index, which is calculated based on the first principal component of rule of law index (RL), control of corruption index CC), regulatory quality (RQ) index, political stability index, and government effectiveness (GE) index.	World Bank

Variable	Definition	Source
Tax haven	An indicator variable that equals one if a firm has at least one disclosed partner from tax haven countries	The Organisation for Economic Co-operation and Development (OECD)
Other variables		
Geographic distance	The sales-weighted average of geographic distance based on the great circle formula between capitals	Institute for Research on the International Economy (CEPII)
English-speaking	The sales-weighted average of an indicator that sets to one if a country has English as a statutory national language	United Nation
Cultural distance	The sales-weighted average of the cultural distance between foreign and US markets using Hofstede's dimensions	Hofstede (2001)
Inst. Ownership	The percentage of institutional ownership	Thomson Reuter
Capital issuance	An indicator variable that equals one if a firm has equity or debt issuance greater than or equal to 3% of market value in the following fiscal year	COMPUSTAT
CSR_STR	Total number of strengths of the community, diversity, employee relations, environment, human rights, and product characteristics qualitative issue areas	MSCI ESG STATS
CSR_CON	Total number of concerns of the community, diversity, employee relations, environment, human rights, and product	MSCI ESG STATS
Competition HHI	Herfindahl–Hirschman Index at the three-digit SIC industry level multiplied by minus one	COMPUSTAT
Competition C4	The sum of the market shares of the four largest firms in an industry multiplied by minus one.	COMPUSTAT
INTERNATIONAL_ANA	The sales-weighted average of the number of analysts following foreign product markets	I/B/E/S
US_ANA	Number of analysts following US firms	I/B/E/S
RWB Media restriction	The sales-weighted average of the difference in media freedom developed by Reporters Without Borders.	Reporters Without Borders
State Restriction 1	The sales-weighted average of the percentage of state-owned newspapers out of the five largest daily newspapers (by circulation)	Djankov et al. (2003)
State Restriction 2	The sales-weighted average of the market share of state-owned newspapers out of the aggregate market share of the five largest daily newspapers (by circulation)	Djankov et al. (2003)