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Financial Development, Corporate Governance and Earnings Management: A Cross-Country Analysis

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Abstract
This paper investigates whether the country's level of financial development helps mitigate the firms' accrual and real earnings management practices while considering the mediating role of corporate governance attributes, i.e., ownership structure. Using a sample of 600 non-financial firms of 22 developing and developed economies from 2008 to 2017, we applied the Generalized Method of Moments (GMM) to estimate the moderated mediation model. Our results, firstly, verified the negative association between financial development and earning management practices in developed and developing countries. Secondly, managerial and institutional ownership which are proxies of ownership structure, significantly mediates the relationship of financial development with accrual and real earnings management. Lastly, we found that measures of CM, board independence, and audit committee independence, significantly moderate this mediation process of ownership structure in the relationship of financial development with accrual/real earning management. This paper contributes to the literature by providing evidence that the CM moderates the mediation process of ownership structure between financial development and earnings management. This moderation is negative when earning management is measured as real earning management. However, it is positive in the case of accrual earning management. The empirical evidence of this research is potentially helpful to academicians and regulators in strengthening the legitimacy of corporate governance policies while emphasizing financial development.

Keywords: Financial Development, Ownership Structure, CM Earnings Management, Moderated Mediation.

1. Introduction

Financial development may enhance the effectiveness of governance mechanisms and the reporting quality of the firm by reducing the earnings management practices. This paper intends to investigate the role of financial development in restraining the earnings management while considering the mediating role of good governance practices. Financial development may improve the effectiveness of governance policies by establishing an effective regulatory framework, investor protection laws, disclosure practices, as well as ensuring capital market efficiencies by reducing information asymmetry and improving the quality of reported earnings.

The efficiency of capital markets is adversely affected by information asymmetry as conceded by Fama, "Poorly informed investors could theoretically lead to market astray". The reporting of earnings in annual financial reports guide the market participants in their buying and selling decisions associated with the stocks' expected risk and returns (Salerno, 2013). Hence, the quality of reported earnings is detrimental to enhance the accuracy, reliability, and relevance of the available accounting information to investors, managers, and other market analysts (DeFond, 2010).

Though access to information has become more pronounced than ever with technological innovations, the availability of information does not qualify the appropriate standards required to ensure quality and transparency. The roots of the financial crises (in late 1990s and early 2000s) can be traced back to fake financial statements with insufficient explanatory power regarding financial decision-making. This scam of financial information created by some giant corporations misleads financial analysts and other regulatory bodies in predicting the scandals and indiscretions of the capital market leading to reduced investors' confidence in the quality and reliability of reported earnings (Kiernan, 2005).

Several studies have investigated the widely used tool of earning management (EM henceforth) to fabricate the actual earning figure, either to meet the firm's future earnings forecast or to grasp their economic benefits. However, EM is highly practiced in developing economies as compared to developed economies which, may cause many irregularities in the financial markets and ultimately weakens the level of investor confidence in the earning figure reported in financial statements (Leuz et al., 2003& Ilyas, 2018). This implies that developing economies have less developed financial systems and markets, which increases information asymmetry and agency problems leading to a higher level of EM (Enomoto et al., 2018).

In response to financial scandals and frauds, the countries developed transparent accounting systems to get better and transparency processes of the firms and facilitate stakeholders to get high-quality accounting information. To measure the quality of accounting information, EM is widely used as a proxy in literature. Schipper (1989) initially defined EM as *"Purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain".*

Since the collapse of many high-profile corporate giants, EM has become a topic of interest for researchers around the globe. Numerous studies have claimed that it is an important factor affecting the quality of accounting information (Dechow et al., 2010). Further, Saona & Muro (2018) claimed that financial development with firm and country-level characteristics strengthens the earning quality by reducing opportunistic managerial behavior, improving the reporting process, and facilitating the development of financial markets in the country, which ultimately reduces EM. Hence, financial development restrains accrual and real EM (Enomoto et al., 2018).

EM activities may be controlled by corporate governance (CG hence forth) strategies. The concept of CG lies around promoting the accountability of the executives to the stakeholders while providing them independence and appropriate compensation to employ adequate the strategies that align with the firm's long-run goals (Rehmans & Mangla, 2010).

Several studies explain the role of ownership structure (a measure of CG) in restraining top management's discretionary EM practices. The literature on EM is enriched with the evidence of the substantial influence of ownership structure (OS, henceforth) on the accountability and transparency of reported earnings (O'Callaghan et al., 2018 and El Moslemany & Nathan, 2019). The studies have widely discussed the two important elements of ownership structure, such as managerial ownership[1](MO, henceforth) and institutional ownership[2] (IO, henceforth) in controlling the opportunistic EM behavior of the management.

The balanced and effective composition of the board structure and the firm's audit committee independence are the widely discussed measures of CM to weaken the earning manipulations. Fama & Jensen (1983) assert that the effective composition of the corporate board is crucial in ensuring the internal CM and compliance with governance standards. The corporate board should be composed of at least one-third of independent members (Johari et al., 2009), which should be completely isolated from executive positions (Susanto et al., 2017) and pledged to the monitoring of the board and management of the company (Machmuddah, 2015). Independent directors on the board restrain fraudulent activities in financial reporting, reduce earning manipulations, and guide top management toward the company's long-term growth (Soebyakto et al., 2017). Moreover, many studies (Habbash et al. (2013), Soliman and Raga (2014), and Latif & Abdullah (2015), investigated the role of audit committee independence in restraining the opportunistic behavior of the managers. They argue that proper implementation of accounting regulations is contingent on the sovereignty of the audit committee, which ensures the transparency of accounting numbers in the annual reports.

Good governance practices provide the foundation for competent strategic decisions and facilitate the value creation goals of the firms (Ho, 2005). These effective governance strategies secure the interest of stakeholders and the society at large (Hassan & Butt, 2009). Considering the role of financial development (FD, hence forth) in improving the governance mechanism, we assert that FD may ensure CG policies by establishing an effective regulatory framework, investor protection laws, disclosure practices, and an efficient monitoring mechanism. However, this relationship between FD and CG has not been extensively investigated in the corporate finance literature.

This paper contributes to the literature by investigating the relationship between FD and CG. Secondly, the literature on EM documents the empirical evidence of the significant contribution of the country's financial system development in mitigating the EM practices (Enomoto et al., 2018; Saona & Muro, 2018). However, the potential role of CG strategies in strengthening the influence of financial system development in reducing EM practices has not been empirically investigated in the literature. Therefore, examination of the role of CG to clearly define the links between financial system development and EM is the central problem of this study. By considering the missing role of CG in the nexus between FD and EM, this paper attempts to fill this research gap by investigating the cross-country relationship between FD, CG, and earnings management practices. Moreover, this paper investigates the mediating role of CG in the relationship between FD and EM.

This study contributes to the literature by using a more comprehensive index of FD by IMF instead of using different pillars of FD used in the literature on EM (Enomoto et al., 2018) This study fills the research gap by considering the IMF's FD index, the aggregate of two sub-indices, the financial institutional development index and the financial market development index.

We extend the work of earlier studies that document the impact of FD on EM (Enomoto et al., 2018; Saona & Muro, 2018) and the impact of CG on earnings management (Sakaki et al., 2017 and Mayndarto & Murwaningsari, 2021) by reporting the mediating and moderating role of CG attributes on FD-EM relationship. This paper significantly contributes to the literature by providing an important insight on whether a CM may moderate the mediation process of OS between FD and EM. This mediating role of OS in the relationship between FD and EM is contingent on the firms' CM strategies as the impact of OS on EM may vary with tight or lenient CM strategies of non-financial firms across countries.

This study is a significant contribution to the theory by investigating how a country's level of FD coupled with effective governance mechanism help to deter agency issues by improving audit and CM and the quality of reported earnings. The results in this paper support that the FD and CG helps resolve principal-agent conflict which induces managers towards opportunistic behaviors, which increases agency costs[3] to the firms. Secondly, this paper contributes by providing empirical support on positive accounting theory (Watts & Zimmerman, 1990) in developed and developing economies. Particularly, it provides empirical evidence on the impact of quality of reported earnings and good governance on reducing earning management practices by improved information symmetry and efficient capital market.

Moreover, this study has some practical contributions. The findings of this study are helpful for policymakers to attract potential shareholders by implementing an effective governance mechanism to enhance the quality of disclosure practices and ensure the reliability of financial reports. Once the reliability of financial data is obtained, the shareholders will be more

[1] See for instance, Sánchez-Ballesta & Garcia-Mecca, 2007; Al-Fayoumi, 2010 among others.

[2] See for instance, Kałdoński et al., 2019 and Enomoto et al., 2018 among others.

[3] The additional cost of monitoring the agents due to the disagreement of interest between managers and shareholders associated with the agency problem. These costs include monitoring cost, bonding cost, and residual cost.

responsive to the firm's financial performance measures. Additionally, the findings of our study will facilitate the investors and market participants in decision making and understanding the executives' discretionary powers to manage accounting earnings and the data reported in firms' financial statements. In addition, government and other regulatory authorities can use the findings of this research as empirical evidence in developing the regulatory and advisory framework. They can better understand that FD indicators, including investor protection, financial markets and institutional development, voluntary corporate disclosure, sophisticated accounting standards, along with effective governance policies, will mitigate the EM practices and hence, improve the earning quality of the firms.

Conclusively, the objectives of this paper are, firstly, to verify the existing FD-EM relationship across developing and developed economies. Secondly, to examine the impact of FD on CG strategies. Thirdly, to examine the impact of CG on earnings management practices. Lastly, to analyze the mediating role of CG in the relationship between FD and EM practices by taking two dimensions of CG i.e., OS and CM in the mediation analysis using moderated mediation model.

We found that the firms operating in the developing economies are more engaged in accrual and real earnings management practices as compared to those operating in the developed economies. This fact can be attributed to the agency problem arising from the information asymmetry and ineffective audit and CM in the developing economies. After incorporating OS in our model, we found a partial mediating effect of OS in the existing relationship between FD and EM. Further, this study also provides new evidence to the literature that two measures of corporate CM, i.e., board independence and audit committee independence, moderate this mediation process of OS in FD-EM relationship.

The rest of the paper is organized as follows; section two reviews the literature briefly, section three lays out the methodology, section four presents the result, and section five concludes the findings of this research.

2. Literature Review

Financial system development is essential for economic growth, presumably linked to the accounting behavior of the corporate managers (Beck et al., 2001). The major consequences of the FD are efficient regulation of the legal system, corporate law system, and transparent audit and CM provided by national financial authorities.

Along with the other factors, including transparency and disclosure practices, efficient audit and CM, and quality of accounting information system, the literature provides evidence on the role of EM in improving the quality of accounting information (Dechow et al., 2010). Business entities are involved in EM process to sustain their financial positions and deceive shareholders and investors (Kumari and Pattanayak, 2017; Khunkaew & Qingxiang, 2019). These manipulated figures were the vital source of the financial crises in late 1990s. The literature provides evidence on the negative relationship between EM and FD (Yu, 2008), positive impact of information asymmetry on EM (Abad et al., 2016), restraining EM activities due to transparency in disclosure of accounting information by firms and positive impact of strong legal protection on the earning management (Leuz et al., 2003). Moreover, Bartov et al. (2001) claimed that the country's national financial accounting standards and institutional development enhance the informativeness of the reported earnings. Jaggi et al. (2012) found that earnings quality is positively affected by industry audits even in the presence of a weak level of investor protection.

Further, one of the popular theories of FD is the law and finance theory (Beck et al., 2001) supported the role of legal institutions in describing international differences in FD. The theory suggested that those countries where the legal system enforces private property rights, protect the legal rights of investors, support contractual settings, and funds are easily accessible, discourage EM. Some past researchers report that developing a financial system can minimize EM (Saona & Muro, 2018 and Enomoto et al., 2018) and lead to good governance in the institution that protects the stakeholder's rights in the institutions (Leuz et al., 2003). So, in the context of the above literature, we believe that there is a significant relationship between FD and EM practices. No study has yet investigated this relationship using a comprehensive measure of FD. This research uses an aggregate measure of the FD index and its sub-indices, i.e., institutional development index and market development index separately, to examine the impact of a country's level of FD on EM practices of the non-financial firms. These sub-indices measure important dimensions of FD which stimulate the process of FD as discussed above. Hence, this study proposes the following hypothesis.

H_1: FD significantly affects the earnings management practices of non-financial firms.

FD is a broad concept that encompasses the development of financial institutions, markets, and instruments, which are inevitable for economic growth and the expansion of the investment process in the country (Altay and Topuc, 2020). However, FD brings about diverse stakeholders, including auditors, national financial authorities, managers (funds managers), and shareholders (funds providers). In today's dynamic world, agency problem arises due to the segregation of ownership and control in the corporate sector (Jensen and Meckling, 1976). So, maximizing shareholder's wealth is the primary concern of every organization (Brigham, 2012)

Additionally, FD ensures effective CG strategies by establishing the regulatory framework, investor protection laws, transparency and disclosure practices, and efficient audit and monitoring mechanisms. These potential consequences of FD would be more likely to reduce information asymmetry and agency problems by enhancing the effectiveness of CG mechanisms (Abad et al., 2018).

Further, by improving transparency and disclosure practices, effective CG strategies facilitate the investor with independently verified information, resulting in vibrant and efficient capital markets. A good governance mechanism underpins the integrity and efficiency of markets as well as boosts investors' confidence. Particularly, investment in equity-based securities heavily relies on good governance strategies and probable corporate disclosure practices (Yu, 2008). Some previous researchers have shown the relevance of OS with the indicators of FD. They reported that OS structure influences the quality of accounting

information.[4], investor protection and property right protection[5], liquidity risk and financial distress[6], corporate disclosures, capital market development, and other aspects of financial system development[7].

This paper contributes to the literature by investigating the impact of FD using the FD index and its two sub-indices, i.e., Institutional development index and Market development index, on the sample firms' OS (managerial and IO) across a set of developed and developing countries. Hence, this study proposed the following hypothesis.

H_2: FD is significantly associated with the corporate ownership structure of non-financial firms.

Additionally, the role of CG in restraining EM practices is not a refuting fact. The literature provides a consensus that the CG mechanism is the major prop in ensuring the quality of financial reporting while plummeting the agency costs (Ilyas, 2018). Particularly, the OS has substantial power to reduce EM (O'Callaghan et al., 2018). Various researchers have reported the positive relationship between institutional investors and the level of EM, supporting the argument of the strategic alliance and conflict of interest hypothesis (Salajeghe et al., 2012). While some others found a negative association between IO and EM (For instance, Sakaki et al., 2017 and Kałdoński et al., 2019). Similarly, previous studies documented contradictory results on the correlation between MO and EM. In this context, the proponents of the entrenchment effect hypothesis claimed a positive relationship between MO and EM (Sánchez-Ballesta & Garcia-Mecca, 2007). However, the incentive alignment effect advocates emphasize the inverse relationship between MO and EM (O'Callaghan et al., 2018).

Therefore, based on the above-discussed argument documented in the extant literature, we argue that ownership structure may influence the EM practices of non-financial firms across developed and developing countries. Particularly, based on the predictions of the entrenchment effect (Morck et al., 1988) and the incentive alignment effect (Jensen & Meckling, 1976), we believe that MO may positively/negatively impact earnings management practices. Whereas, based on the above-discussed arguments of monitoring hypothesis, strategic alignment hypothesis, and conflict of interest hypothesis, we assert that IO may have significant positive/negative effects on the EM practices of sample firms of the study. Therefore, this study proposes the following hypothesis.

H_3: Ownership structure significantly affects the EM practices of non-financial firms.

To deal with the agency issues, CG introduced some CM to stem the disreputable managerial actions resulting in deadweight losses to the wealth distributors. Two widely discussed characteristics of board structure and audit structures are independent directors on the company's board and an independent audit committee. These are essential CM to limit top management control over value relevance decisions of the firms (Johari et al., 2009).

In this context, the literature has questioned the capacity of independent boards to detect and limit the firms' EM practices[8]. External or non-executive directors on the board improve earning quality and reduce the probability of fraud in a firm's annual reported income (Beasley, 1996). Hence, independent boards are more effective in reducing the EM practices of the firms. (Dechow et al., 1996).

Audit committee independence is also imperative in restraining the myopic behavior of the top executives by tightening the internal audit and CM. The presence of an independent audit committee is also helpful in reducing EM practices of the firms irrespective of their growth strategies (Latif & Abdullah, 2015). Several studies showed that audit committee characteristics have a significant impact on the level of earnings management[9].

Finally, literature provides evidence that OS and CM exerts a strong influence on the EM practices of the firms. Kouaib & Jarboui (2014) verifies the role of ownership structure and CM attributes such as audit quality in reducing the managerial discretionary earning manipulations. They assert that the interaction effect of IO and audit quality is significant in reducing EM behaviors. Moreover, Zureigat (2011) reported that some OS types are related to measures of audit quality. For instance, foreign and IO are positively related to audit quality. They show that the higher percentage of foreign and institutional investors on the company's OS will ultimately improve the audit quality by hiring well-reputed auditors.

Moreover, the literature also provides credence to the argument that audit quality measures can moderate the relationship between OS and earnings management practices. For example, Gul et al. (2002) found that the presence of Big 6 audit moderates the inverse relationship between insider ownership and discretionary accrual management. They confirmed that audit quality could reduce the agency costs, and higher quality audit mitigates the managerial incentives to manage earnings. Therefore, we may argue that CM attributes can moderate the relationship between OS and earnings management.

Conclusively, the objectives of this research are based on the predictions of agency theory and the positive accounting theory of EM. Agency problems in the firm arising from the information asymmetry may lead to a higher level of EM. Moreover, positive accounting theory entails why managers choose alternative accounting methods along with the economic consequences of financial accounting and reporting. Hence, the responses of the agents towards available accounting policies coupled with the existing agency issues may induce EM practices, which, can be reduced by the regulation and development of financial systems. Further, the proper implication of good governance practices is considered a tool to weaken EM practices, hence, serving as a mediator in explaining the established relationship between FD and EM.

FD is related to earnings management via OS. Yet, the intensity of the CM (tight/ lenient) is proposed to be a condition for different categories of owners to influence the level of EM activities. More precisely, the mediating role of OS in the relationship between FD and EM is contingent on the level of CM strategies in the firms. Hence, the following hypotheses are proposed.

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[4] (See Gedajlovic et al., 2005)

[5] (See La Porta et al., 1997)

[6] (See Devos et al., 2013; Cao & Petrasek, 2014 among others)

[7] (See García-Meca and Sánchez-Ballesta, 2010; Khlif et al., 2017 among others).

[8] (See Dechow et al., 1996; Alqatan, 2019; Wasan & Mulchandani, 2020 among others).

[9] (See Habbash et al., 2010; Soliman and Ragab, 2014 among others).

H_4: Ownership structure mediates the effects of FD on earnings management
H_5: CM moderates the indirect effect of FD on earnings management through OS. More specifically, OS will mediate the FD- earnings management relationship, but this mediation effect will vary with the quality of CM (High/Low).

3. Research Design

3.1 Population and Sample

The total population for this research consists of non-financial firms of developing and developed countries. The sample was taken from 8 non-financial sectors, which comprise 676 firms listed on the Stock Exchanges of 11 developing and 11 developed countries. The sample of developed economies includes the USA, UK, Hong Kong, Italy, Japan, Canada, Australia, France, Switzerland, Spain, and Sweden. However, developing economies include Brazil, Malaysia, Russia, India, Indonesia, China, Turkey, Thailand, Poland, Israel, and Pakistan. The financial sector of the sample countries was ignored as these firms differ from non-financial firms in terms of the preparation of annual financial reports, among other characteristics (La Porta et al., 1997). Initially, we obtained the data regarding the sample firms from 2008-to 2017 with firm-year observations of 6760. The sample period is 2008 – 2017. The period before the global financial crisis was ignored to avoid any structural break. Afterwards, some filtering techniques and the missing data analysis were applied to refine the data. The firms with complete annual financial reports were selected, and the firms with missing data were dropped from the sample using filtering techniques. The second important factor considered during the filtering of data was that the firms remained operational during the study period and the firms which are not merged during this period were selected, reducing the sample firms from 676 to 600 for the underlying study.

Further, the estimation of EM proxies (AEM & REM) requires a lag period of one or two years to be calculated accurately. Hence, 2007 and 2008 were used as lag years, and our sample period was reduced from 10 to 8 years. Finally, the study includes 4800 firm-year observations for 600 firms and 8 years for the subsequent analysis. The data on FD is the FD index developed by IMF[10]. The CG and estimation of EM measures are based on the data collected from the annual financial reports of the firms. The description and measurement of variables in the study are given in Table I.

Table I: Measurement and Description of Variables

Variable	**Measurement**	**Previous studies with similar measurement**
Independent Variable-Financial Development (FD)	Financial Development Index (FDI) measured as the aggregate of two sub-indices such as Financial Market development (FD-MAR) and Financial Institutions Development (FD-INS)	Katsiaryna Svirydzenka (2016). Javaid et al., (2021) (b)
Mediating Variable-Ownership Structure (OS)	Managerial Ownership (MAN-OS) measured as no of shares owned by managers divided by the total no of shares and Institutional Ownership (INS-OS) measured as no of shares owned by institutions divided by the total no of shares.	Kaldonsaki et al., (2020), Javaid et al., (2021).
Moderating Variable-Control Mechanism (CM)	Board Independence (BI) measured as no of independent directors divided by the total no of directors on the board and Audit Committee Independence (ACI) measures as the percentage of independent members in audit committee.	Nazir & Afza (2018), Pathak et al., (2014), Soliman & Ragab (2014).
Dependent Variable-Accrual Earning Management (AEM)	$TACC_{ijt} = \alpha_0(1/Assets_{ijt-1}) + \alpha_1(\Delta REV_{ijt} - \Delta REC_{ijt}) + \alpha_2(PPE_{ijt}) + \alpha_3(\Delta OCF_{ijt}) + \varepsilon_{ijt}$ …….. (1)	Kasznik (1999), Nazir & Afza (2016).
Dependent Variable-Real Earning Management (REM)	$OCF_{ijt} = \beta_0 + \beta_1\left(1/_{Assets_{ijt-1}}\right) + \beta_2(Sales_{ijt}) + \beta_3(\Delta Sales_{ijt}) + \varepsilon_{ijt} \ldots\ldots\ldots (2)$	(Roychowdhury, (2006), Enomoto et al., (2018)
	$DE_{ijt} = \beta_0 + \beta_1\left(1/_{Assets_{ijt-1}}\right) + \beta_2(Sales_{ijt}) + \varepsilon_{ijt}$ …… (3)	
	$PROD_{ijt} = \beta_0 + \beta_1\left(1/_{Assets_{ijt-1}}\right) + \beta_2(Sales_{ijt}) + \beta_3(\Delta Sales_{ijt}) + \beta_3(\Delta Sales_{ijt-1}) + \varepsilon_{ijt}$ …….. (4)	

[10] Data retrieved from the website, https://data.imf.org/?sk=F8032E80-B36C-43B1-AC26-493C5B1CD33B.

	$REM_{ijt} = (A - CFO_{ijt})(-1)(A\_DE_{ijt})(-1)(A - PROD_{ijt}) \dots\dots\dots(5)$	

We used linear dynamic panel estimation by Arellano & Bond (1991), an estimation procedure using the system generalized method of moment (GMM). First lag of dependent variable and lagged values of independent endogenous variables are used as instrument variables in the regression analysis (Arellano & Bond, 1991; Arellano-Bover, 1995). We employed j-statistics by Hansen (1982) for over-identifying restrictions, which checks for the orthogonality between the residuals and instrumental variables. A rejection of the null hypothesis of Hansen J-statistics (p-value < 0.10) entails that the instruments used in the model are not satisfying the orthogonality conditions required for their employment. We tested for the serial correlation by using Arellano & Bond (1991) to test the first order and second-order serial correlation in the first difference residuals of the model. However, we found no serial correlation in our data (El Diri et al., 2020).

2.2 The Econometric Models

The analysis is divided into five phases laid down in Table II. Firstly, it tests the validity of relationship between FD and EM practices of the firms (equation 6). In the second phase, it investigates the impact of FD on the OS of the firms (equation 7). Thirdly, it attempts to explore the impact of OS (MO and IO) in determining the EM practices of the firms (equation 8). Fourthly, it analyzes the mediating role of CG attributes, i.e., OS in the relationship between FD and EM (equation 9 (a, b and c). Finally, it tests whether CM will moderate the mediating role of OS in the relationship between FD and EM (10).

Table II: Econometric Models for Phase 1 to Phase 5

	Econometric Models
Phase 1	$EM_{ijt} = \gamma_0 + \gamma_1(FDI_{jt}) + \gamma_2\left(D/E_{ijt=1}\right) + \gamma_3(SIZE_{ijt-1}) + \gamma_4(MTB_{ijt-1}) + \gamma_3(ROA_{ijt}) + \Sigma\gamma(\text{Year} - \text{Fixed} - \text{Effect}) + \Sigma\gamma(\text{Firm} - \text{Fixed} - \text{Effect}) + \varepsilon_{ijt} \dots.(6)$
Phase 2	$OS_{ijt} = \delta_0 + \delta_1(FDI_{jt}) + \Sigma\delta(\text{Year} - \text{Fixed} - \text{Effect}) + \Sigma\delta(\text{Firm} - \text{Fixed} - \text{Effect}) + \varepsilon_{ijt} \dots(7)$
Phase 3	$EM_{ijt} = \eta_0 + \eta_1(MO_{ijt}) + \eta_2(IO_{ijt}) + \eta_3(Control_{ijt}) + \Sigma\eta(\text{Year} - \text{Fixed} - \text{Effect}) + \Sigma\eta(\text{Firm} - \text{Fixed} - \text{Effect}) + \varepsilon_{ijt} \dots(8)$
Phase 4	$EM_{ijt} = \mu_1 + c(FDI_{jt}) + \varepsilon_{ijt} \dots..(9a)$ $EM_{ijt} = \mu_2 + c'^{(FDI_{jt})} + b(OS_{ijt}) + \varepsilon_{ijt} \dots(9b)$ $OS_{ijt} = \mu_3 + a(FDI_{jt}) + \varepsilon_{ijt} \dots(9c)$
Phase 5	$OS_{ijt} = \mu_1 + a(FDI_{jt}) + \varepsilon_{ijt}$ $EM_{ijt} = \mu_2 + c'(FDI_{jt}) + b_1(OS_{ijt}) + b_2 CM_{ijt} + b_3(OS_{ijt})(CM_{ijt}) + \varepsilon_{ijt} \dots..(10)$

In phase 1, AEM from model 1 and REM from model 5 (Table I) is used as accrual and real earnings management proxies, respectively. However, the FD index is the mean value of institutional development and market development index developed by IMF in their FD reports. For unbiased estimation of the impact of FD on EM, we added some control variables in the model. In this context, Lemma et al. (2013) assert that some firm-level, industry-level, and country-level factors determine the EM practices of the firms. For instance, prior studies (Lemma et al., 2013; Enomoto et al., 2018), confirm that the debt ratio of the firm is significantly related to their EM practices. Moreover, Size, MTB, and ROA are included in the model to control the impact of firm size, growth rate, and performance effects, respectively (Enomoto et al., 2018). Further, following Degeorge et al. (2013), we included year fixed effect and firm fixed effect in models to control the year and firm effects, respectively.

Following the Baron & Kenny (1986) mediation model (phase 4), we analyzed the mediating role of a CG attribute, i.e., OS in the relationship between FD and EM. The study's final analysis phase empirically tests whether some attributes of CM will moderate the mediating role of OS in the relationship between FD and EM (Phase 5). For this purpose, we applied the moderated mediation model presented by Hayes (2013) to explain the conditional process of direct and indirect effects between variables. They contend that when the mediation is moderated, the indirect effect of the independent variable (X) on the dependent variable (Y) through the mediator (M) is contingent on the moderator (V). Therefore, the direct and indirect paths of moderated mediation model are the function of moderating variables.

4. Results

4.1 Descriptive Statistics

Table III presents the summary statistics of all the variables. Panel A of table III reports the results of descriptive statistics, whereas panel B displays the results of multicollinearity statistics, including tolerance and variance inflation factor (VIF). The descriptive statistics point out that the average values of AEM and REM are 0.05 and 0.14, with a standard deviation of 0.083 and 0.745, respectively. Average MO is 2%, and IO is 69% in the sample firms of this study. The data in Panel A also describes that more than 85% of the board activities are independent of any managerial and political influences, whereas, the average audit committee independence is 76.6%. Moreover, the sample countries' average FD index is 69.2%, with a standard deviation of 21.83%. The firm size, ROA, MTB, and leverage ratio have mean values of 16.99, 6.18, 75.78, and 0.29, respectively.

Panel B shows the tolerance and VIF, which are used to check multicollinearity between explanatory variables. The problem of multicollinearity arises when there exists a strong correlation between two or more explanatory variables (Ho, 2005). VIF values greater than 10 and tolerance values less than 0.1 indicate the presence of multicollinearity. The statistics in Panel B

confirm that all the variables of this study are free from multicollinearity as per the above-explained criteria of tolerance and VIF.

Table III: Descriptive Statistics

Panel A						**Panel B**	
Variables	**N**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**	**Tolerance**	**VIF**
AEM	5340	0	4	0.05	0.083	_	_
REM	3339	0	21	0.14	0.745	_	_
FDI	5990	0	0.98	0.6902	0.2183	0.424	2.359
INS-OS	5816	0	51	0.69	3.904	0.746	1.34
MAN-OS	5945	0	11	0.02	0.377	0.976	1.024
BI	5728	0	133	85.43	22.938	0.956	1.046
ACI	5740	0	100	76.6	17.335	0.98	1.02
Leverage	5972	0	4	0.29	0.205	0.901	1.11
ROA	5965	-180	128	6.18	9.931	0.914	1.094
Size	5889	10	27	16.99	2.67	0.482	2.073
MTB	5886	-22005	5157	75.78	332.303	0.984	1.017
						Mean VIF	1.342556

4.2 Empirical Analysis and Discussion of Results

To test the hypotheses of the study, in the first phase, we employed four different models to test the first hypothesis of the study. Table IV presents the regression results of regression to estimate the impact of FD on earnings management.

Results of model I and model III indicate that FD has a significant negative impact on both types of EM (Accrual & Real). It implies that the firms operating in developed countries (bear high scores on the FD index) are less engaged in earnings management as compared to the firms operating in developing countries (bear low scores on the FD index). Hence, the level of FD restricts managers from engaging in accrual and real earnings management. In this context, our results depict that accounting figures reported by firms operating in less developed economies are more extensively managed by self-centered managers, which may concern global investors and policymakers. Therefore, FD is perceived as an influential factor in reducing the EM practices of the firms (Javaid et al., 2021; Enomoto et al., 2018). Additionally, the results of model II and model IV show that financial institutional development has a significant negative effect on accrual and real earnings management. In contrast, the effect of financial market development is insignificant. Finally, firm size, leverage, and ROA significantly reduce the accrual and real earnings management among the control variables.

Table IV: Empirical results of Relationship between Financial Development and Earning Management

Variables	AEM		REM	
	Model I	Model II	Model III	Model IV
AEM_{ijt-1}	0.013446 (0.318613)	0.057206 (2.441713)**	–	–
REM_{ijt-1}	–	–	-0.480831 (-24.9851)***	-0.458895 (-333.9916)***
FD	-0.316204 (-2.448823)**	–	-0.844880 (-6.596091)***	–
FD-INS	–	-0.119624 (-2.028227)**	–	-0.288735 (-4.685397)***
FD-MAR	–	0.015202 (0.392135)	–	-0.004002 (-0.076800)
Leverage	-0.087233 (-2.348265)**	0.016865 (0.264029)	0.012876 (0.331430)	0.108555 (2.105209)**
Size	-0.009748 (-2.133512)**	0.001177 (0.155957)	0.037581 (3.934169)***	0.055188 (3.707720)***
MTB	-3.45E-05 (-2.248102)**	-2.14E-05 (-2.909806)***	1.09E-05 (0.302435)	4.96E-05 (0.826678)
ROA	0.000186 (0.261720)	-0.003064 (-4.602401)***	0.000509 (1.930766)*	0.000605 (1.133335)
Prob (J Statistics)	0.46	0.47	0.87	0.86
m_1	-1.431859	-1.672327	-0.352203	-0.651232
m_2	-0.639330	-0.280841	-1.844864	-1.986472
Wald Chi Square	231.9928***	38.51828***	56.91588***	31.87993***

Notes: This table describes the results from the first difference generalized method of moment regressions for the effect of financial development on the level of accrual and real earnings management in the following order: Model I is developed to test the impact of financial development index on the accrual earning management, Model II is showing the impact of financial institutions and financial market development on the accrual earning management separately. Similarly, Model III and Model IV are employed to investigate the effects of aggregate financial development and financial institution and market development

on real earning management. AEM_{ijt-1} and REM_{ijt-1} are the lagged dependent variables. The probability of J statistics is produced from the Hansen test for over-identifying restrictions. The AB test (Arellano & Bond, 1991) is used to test the serial correlation in the first difference residual by using the (m_j) statistics (H_0: no autocorrelation). The table shows the m_1 and m_2 values for the first and second order serial correlation results. The Wald Chi-square shows the joint significance of the model's coefficients (H_0: C_n=0), t statistics are in the parenthesis, *, **, *** indicates the significance level at 10%, 5%, and 1%, respectively.

These results strongly support the earlier notion that the potential effects of FD, including the quality of accounting information, improved monitoring mechanism, and lower level of information asymmetry due to transparency and disclosure practices, are essential in ensuring the quality of accounting earnings (Dechow et al., 2010; Yu, 2008) and ultimately, reduce the EM (Enomoto et al., 2018; Saona & Muro, 2018). Our results are also consistent with Bartov et al. (2001), who claim that national financial accounting standards and institutional development enhance the informativeness of the reported earnings while reducing the EM.

This paper importantly contributes to the literature on EM by considering the comprehensive measure of FD, not only the economic dimension of the financial system development as used in previous studies.[11]. For this purpose, we used two categories of FD indicators developed by IMF, namely, financial institutions and financial markets.[12] Our findings provide evidence of the aggregate impact of the FD index and the individual effects of financial institutional and financial markets development on the level of accrual and real earnings management efficiency (see Katsiaryna Svirydzenka (2016) for detail on FDI).

Secondly, we have analyzed the relationship between FD and the OS of the firms. Results of model I and model II in table V reveal that the aggregate level of FD and development of financial institutions and markets are significantly positively associated with IO. However, the results of models III and IV show that overall FD and financial institutional development significantly negatively influence the MO of the sample firms. In contrast, the effect of financial market development on MO is positive, however, insignificant.

These results are consistent with the argument that FD in the country results in developed institutions and markets (Hellwig, 1991), which leads to higher IO (Mayer and Vives, 1995). These institutional investors, by improving the corporate disclosure practices and quality of accounting information[13] reduce liquidity risks[14], boost investor confidence[15] , and hence, causes further developments in the capital markets.[16] Further, Cao & Petrasek (2014) give credence to our argument by asserting that institutional owners help to reduce liquidity risk by effectively monitoring insiders and reducing the level of information asymmetry. They empirically proved that stocks owned by individuals are more sensitive to liquidity risks rather than portfolio stocks. The findings in table V align with the previous research, including Khlif et al. (2017).

Moreover, our results provide strong credence to the argument that the development of banking and non-banking financial intermediaries and other financial institutions leads to efficiencies in capital markets (Mayer and Vives, 1995). These capital market efficiencies facilitate equity financing and influence the firm's OS. Hellwig (1991) also documented similar results. They emphasize that intermediaries financing permits more risk diversification as compared to direct financing. Financial intermediaries working as institutions may reduce or, in some cases, eliminate information asymmetry between the firms and investors, which boosts the efficiency of capital markets in the country.

Table V: Empirical Results of Relationship between Financial Development and Ownership Structure

Variables	Institutional Ownership		Managerial Ownership	
	Model I	Model II	Model III	Model IV
INS_OS_{ijt-1}	0.532215 (3.679706)***	0.353645 (9.979063)***	–	–
$MAN\text{-}OS_{ijt-1}$	–	–	-0.680449 (-9.636268)***	-0.992602 (-12.7121)***
FD	0.562902 (2.899524)***	–	-0.315715 (-2.326138)**	–
FD-INS	–	0.178407 (3.206543)***	–	-1.22825 (-0.905953)***
FD-MAR	–	0.318614 (3.124912)***	–	1.053483 (3.275742)
Prob (J Statistics)	0.87	0.34	0.97	0.83
m1	-1.696996	-2.605381	0.549818	4.291382
m2	-0.190349	-1.584669	-0.694712	-4.991130
Wald Chi-Square	66.49683***	140.1557***	94.20010***	11.66466***

[11] (E.g Leuz et al., 2003; Enomoto et al, 2018).

[12] This index is the aggregate of institutional and market development. The development of both financial institutions and markets is measured in terms of their depth, access, and efficiency.

[13] (Gedajlovic et al., 2005)

[14] (Cao & Petrasek, 2014)

[15] (Denis and McConnell, 2003)

[16] (García-Meca and Sánchez-Ballesta, 2010).

Notes: This table describes the results from the first difference generalized method of moments regressions for the effect of financial development on the ownership structure in the following order: Model I is developed to test the impact of financial development index on institutional ownership, Model II is showing the impact of financial institutions and financial market development on institutional ownership separately. Similarly, Models III and IV investigate aggregate financial development and financial institution and market development effects on managerial ownership. INS_OS_{ijt-1} and MAN_OS_{ijt-1} are the lagged dependent variables. The probability of J statistics is produced from the Hansen test for over-identifying restrictions. The AB test (Arellano & Bond, 1991) is used to test the serial correlation in the first difference residual by using the (m_i) statistics (H_0: no autocorrelation). The table shows the m_1 and m_2 values for the first and second order serial correlation results. The Wald Chi-square shows the joint significance of the model's coefficients (H_0: C_n=0), t statistics are in the parenthesis, *, **, *** indicates the significance level at 10%, 5%, and 1%, respectively.

Table VI: Empirical Results of Relationship between Ownership Structure and Earning Management

Variables	Model I	Model II
AEM_{ijt-1}	0.084123 (8.208289)***	–
REM_{ijt-1}	–	0.096472 (24.00069)***
INS-OS	0.002905 (5.112925)***	-0.247521 (-10.70891)***
MAN-OS	-0.012979 (-2.196169)**	-1.536082 (-2.115137)**
Leverage	0.031669 (1.199611)	-0.927520 (-2.707719)***
Size	0.007956 (1.771974)*	-0.007196 (-0.346656
MTB	-4.50E-05 (-4.451791)***	-5.72E-05 (-0.778924)
ROA	4.72E-05 (0.097182)	0.003304 (3.181961)***
Prob (J Statistics)	0.13	0.86
m_1	-1.648658	-2.124735
m_2	0.333039	0.252207
Wald Chi Square	129.5772***	944.8551***

Notes: This table describes the results from the first difference generalized method of moments regressions for the effect of ownership structure on the level of accrual and real earnings management in the following order: Model I is developed to test the impact of institutional ownership and managerial ownership on the accrual earning management, Model II is showing the impact of institutional ownership and managerial ownership on real earning management. AEM_{ijt-1} and REM_{ijt-1} are the lagged dependent variables. The probability of J statistics is produced from the Hansen test for over-identifying restrictions. The AB test (Arellano & Bond, 1991) is used to test the serial correlation in the first difference residual by using the (m_i) statistics (H_0: no autocorrelation). The table shows the m_1 and m_2 values for the first and second order serial correlation results. The Wald Chi-square shows the joint significance of the model's coefficients (H_0: C_n=0), t statistics are in the parenthesis, *, **, *** indicates the significance level at 10%, 5%, and 1%, respectively.

Thirdly, we examine the impact of OS on accrual and real earnings management. Table VI presents the results of this relationship between OS and EM practices of sample firms. Results of the model I in table VI indicate that IO has a statistically significant positive impact on accrual EM and MO has a statistically significant but negative impact on the level of accrual EM. While results of model II describe that both institutional and MO have a significant and negative influence on the real EM practices of the sample firms. Moreover, leverage, Size, MTB, and ROA are used as control variables in models I and II. In model 1, only MTB has a significant negative association with accrual EM. In model 2, leverage and ROA have significantly negative and significant positive impacts on real EM.

According to the findings of this paper, IO is perceived as a source of promoting accrual EM, and this argument is aligned with the conflict of interest[17] and strategic alignment hypothesis[18]. Particularly, when the ownership of the firms is highly concentrated in the large blocks of investors, they can more easily access the private information which is not publicly Ftraded and grasp their private benefits by exploiting the wealth of minority shareholders (Kim, 1993). Several studies (For instance, see Velury & Jenkins, 2006) empirically confirmed this direct effect of IO on EM.

However, in real EM, IO negatively affects the level of EM. These findings support the argument of the monitoring mechanism hypothesis, which infers that institutional investors tighten the monitoring and control over myopic managerial behavior and hence negatively associated with EM practices. In this context, many studies have documented the negative association

[17]The conflict of interest hypothesis states that institutional investors frequently favor top management in case of disagreements between different investment groups, ultimately raising the managers' value-destroying activities.

[18] The strategic alignment hypothesis asserts that institutional investors make an alliance with the top management and realize their private benefits at the stake of minority shareholders

between institutional investors and EM[19]. The advocates of the monitoring hypothesis have accentuated the imperative role of institutional investors to scrutinize managerial value-destroying practices. Their intervention in managerial decisions will eventually boost firm performance by increasing the stock price and reducing the EM practices, particularly manipulations related to the real earnings of the firms (Velury & Jenksin, 2006). The active monitoring by institutional owners is systematically associated with the magnitude of their investment in the companies.

The results show that MO helps restrain the sample firms' accrual and real earnings management practices. These findings are consistent with the hypothesis of the incentive alignment effect (Jensen & Meckling, 1976). The proponents of the incentive alignment effect assert that MO is a monitoring device to control the managerial discretionary accrual management, particularly when the accruals are managed to increase annual income. Earlier studies have also reported their empirical evidence in favor of the incentive alignment effect by validating the significant contribution of MO in restraining financial and non-financial firms' EM practices (Ali et al., 2008; O'Callaghan et al., 2018).

Table VII: Empirical results of the Relationship between Financial Development and Earning Management with the Mediating role of Ownership Structure

Variables	Model I	Model II
AEM_{ijt-1}	-0.027952 (-0.720759)	–
REM_{ijt-1}	–	0.085723 (1.336884)
FD	-0.225580 (-2.780490)***	-0.556016 (-3.461816)***
Ins-Os	0.002926 (4.285207)***	-0.052764 (-0.911194)
Man-Os	-0.012540 (-2.031392)**	-7.044085 (-2.398981)**
Leverage	-0.038598 (-1.600761)	-0.161234 (-1.778092)*
Size	-0.013803 (-3.672665)***	-0.008339 (-0.696498)
MTB	-4.04E-05 (-3.581128)***	-1.60E-05 (-0.369808)
ROA	0.000711 (1.223266)	0.001000 (1.638153)
Prob (J Statistics)	0.52	0.25
m_1	-1.203231	-1.527583
m_2	-1.860403	1.984919
Wald Chi-Square	78.35700***	26.73187***

Notes: This table describes the results from the first difference generalized method of moments regressions for the mediating effect of ownership structure in the relationship between financial development and earning management in the following order: Model I is developed to test the mediating effect of ownership structure on the relationship between financial development and accrual earning management, Model II is showing the mediating effect of ownership structure on the relationship between financial development and real earning management. AEM_{ijt-1} and REM_{ijt-1} are the lagged dependent variables. The probability of J statistics is produced from the Hansen test for over-identifying restrictions. The AB test (Arellano & Bond, 1991) is used to test the serial correlation in the first difference residual by using the (m_i) statistics (H_0: no autocorrelation). The table shows the m_1 and m_2 values for the first and second order serial correlation results. The Wald Chi-square shows the joint significance of the model's coefficients (H_0: C_n=0), t statistics are in the parenthesis,*, **, *** indicates the significance level at 10%, 5%, and 1%, respectively.

Contrary to this, several studies confirmed the positive association between MO and EM practices (Yeo et al., 2002 and Al-Fayoumi, 2010). Their argument is in line with the hypothesis of the entrenchment effect (Morck et al., 1988). It implies that the largest share of insiders (managers) in the company's OS would strengthen their discretionary power and control over financial decisions and lead to value-destroying activities, which ultimately cause deadweight losses to the shareholders. Therefore, it is argued that the increase in MO would eventually exacerbate the process of EM (Yeo et al., 2002).

In the fourth phase, we empirically analyzed the mediating role of OS in the relationship between the firm's FD and EM practices. We used the Baron and Kenny (1986) model for mediation analysis to test this indirect effect of OS. According to Baron & Kenny, the relationships studied in the first three steps should be significant to perform the mediation analysis. There must exist a statistically significant relationship between the predictor and the outcome variable, the predictor and the mediator and the mediator and the outcome variable of the regression model. Our study has followed the first three steps of Baron and Kenny's model of mediation analysis in the last three phases of this study using regression analysis. We analyzed the relationship

[19] (See Elyasiani et al., 2017; sakaki et al., 2017; Kałdoński et al., 2019 among others) .

between FD (predictor) and EM (outcome variable) in the first phase. Secondly, we test the relationship between FD (predictor) and the OS (mediator). Thirdly, the relationship between OS (mediator) and the EM (outcome variable) is tested. The results show that all the coefficients in these models are significant at a 5% significance level (Table VII).

Now, to perform the mediation analysis, we used the dynamic panel data regression model, estimated using GMM to analyze whether there is full mediation, partial mediation, or no mediation of OS in the relationship between FD and EM. According to the assumptions of Baron and Kenny's mediation model, there must be a significant relationship between the predictor and the mediator. It means that there should be a direct effect between the two variables to be mediated by the intervening variable. The results in table IV indicate the direct relationship between FD and EM. These results provide strong evidence of the significant negative relationship between FD and EM while controlling for the effect of the mediator. Table VII shows the mediation analysis results. These results reveal that OS (Institutional and managerial) proxies partially mediate the relationship between FD and EM (Accrual and Real). After introducing the OS as a mediator in the model, the indirect effect of FD reduced from -0.316 to -0.225 and from -0.844 to -0.556 for AEM and REM, respectively. However, the coefficients of FD are statistically significant for direct and indirect effects in accrual and real earnings management (see table IV and table VII for a comparison of direct and indirect effects). These results confirm the partial mediation of institutional and MO in the relationship between sample firms' FD and EM practices. Moreover, the finding also provides evidence of the indirect effect of firm size, MTB on accrual earnings, and indirect effect of leverage on real earnings of the sample firms through the OS of the sample firms.

In phase five, we tested the moderated mediation model using the GMM technique. Until now, we have established the argument that the level of FD in the country can refrain managers from the purposeful intervention in the accounting figures and intentional alteration in the timing and structure of business activities to achieve the desired reporting results. Moreover, FD is influential in restructuring the OS of the firms. Further, we concluded that if the firms have adequate ownership by institutional and managerial investors, it can either boost or limit the value-destroying behaviors of the managers, particularly their subjective manipulations of discretionary accruals, which may cause deadweight losses to the current and subsequent value of the non-financial firms. Subsequently, we confirmed the mediating role of OS in the existing relationship between FD and EM.

Meanwhile, the literature on EM is evident with the inevitable role of some CM variables in devising the EM decisions. To address this anomaly and cater to this paper's last objective, we tested the moderating role of the CM in the mediation process by implying the Hayes (2013) model of moderated mediation. For this purpose, we have adopted two significant proxies of CM adopted in CG literature, namely, board independence and audit committee independence. Accordingly, four interaction terms such as BI*INS_OS, BI*MAN_OS, ACI*INS_OS, ACI*MAN_OS are introduced in the model, and the results are shown in table VIII. The probability of J-statistics in all the above tables is greater 0.10 which verifies that the choice of instruments in all estimated models is appropriate and satisfies the orthogonality condition.

Table VIII: Empirical results on Moderating Role of Control Mechanism on the Indirect Effect of Ownership Structure between Financial Development and Earning Management

Variables	Model I	Model II
LagAEM(AEM_{ijt-1})	0.026910 (4.964513)***	–
LagREM(REM_{ijt-1})	–	0.304404 (3.934243)***
FD	-0.138218 (-1.536840)	-0.371806 (-3.803237)***
Ins-Os	0.006445 (-2.159906)**	-0.077952 (-1.163937)
Man-Os	-0.188230 (-3.740021)***	-7.585640 (2.551445)**
BI	-0.000848 (-3.334161)***	-0.000198 (-0.731762)
ACI	-0.001275 (-2.037556)**	0.002501 (3.590894)***
BI*INS_OS	9.93E-07 (0.041517)	0.000176 (0.597374)
BI*MAN_OS	0.001234 (2.637714)***	-0.025410 (-2.167112)**
ACI*INS_OS	0.000128 (3.571272)***	0.000909 (1.338766)
ACI*MAN_OS	0.000562 (2.286737)**	-0.079095 (-2.777033)***
Leverage	-0.093521 (-2.162332)**	0.121512 (1.659177)*
Size	-0.001059 (-0.228082)	0.004707 (0.582908)

MTB	7.79E-06 (0.224779)	-6.27E-05 (-1.901526)*
ROA	0.001542 (1.621027)	0.001688 (3.441780)***
Prob (J Statistics)	0.71	0.95
m_1	-0.094965	-1.444172
m_2	-0.009005	-1.600964
Wald Chi Square	121.7884***	813.821***

Notes: This table describes the results from the first difference generalized method of moments regressions for the moderated mediation model in the following order: Model I is developed to test the mediating effect of ownership structure and moderating effect of control mechanism on the relationship between financial development and accrual earning management, Model II is showing the mediating effect of ownership structure and moderating effect of control mechanism on the relationship between financial development and real earning management. AEM_{ijt-1} and REM_{ijt-1} are the lagged dependent variables. The probability of J statistics is produced from the Hansen test for over-identifying restrictions. The AB test (Arellano & Bond, 1991) is used to test the serial correlation in the first difference residual by using the (m_i) statistics (H_0: no autocorrelation). The table shows the m_1 and m_2 values for the first and second order serial correlation results. The Wald Chi-square shows the joint significance of the model's coefficients (H_0: C_n=0), t statistics are in the parenthesis, *, **, *** indicates the significance level at 10%, 5%, and 1%, respectively.

Table VIII shows the empirical results of the moderated mediation model adopted by the present study. These results elaborate on the following facts regarding the sample firms. Firstly, it provides evidence of the negative association between FD and EM. A higher level of FD in a country may reduce EM in the firms. These findings are consistent with earlier studies. Moreover, the OS is also evident as a powerful source in adjusting the executives' earning manipulations, which is consistent with earlier studies and our findings in tables VI and VII. Further, our findings in table VIII reveal that two measures of CM, such as board independence and audit committee independence, help constrain EM practices of the firms. These results are consistent with literature[20].

The results of table VIII substantiate the moderating role of board independence and audit committee independence in the mediation process of this study. All the interaction terms of models 1 and 2 indicate that both measures of CM are moderating the mediation process. Importantly, the interaction terms of board independence and audit committee independence are positively and negatively significant with MO in model 1 and model 2, respectively. These results confirm that board independence and audit committee independence strengthen the negative relationship between MO and accrual earnings management, weakening the negative relationship between MO and real earnings management. By improving the audit quality, audit committee independence will reduce agency costs and mitigate managerial incentives to manager earnings (Zureigat, 2011). This argument is consistent with (Gul et al., 2002), who reported that audit quality reduces the negative association between MO and EM.

Additionally, the interaction term of IO with audit committee independence is only positively significant in model 1. It provides evidence that audit committee independence gives more opportunities to the institutional investors to make an alliance with the executives to manipulate discretionary accruals. This argument is in line with the conflict of interest and strategic alliance hypothesis. However, the interaction of IO with board independence is insignificant in both models. Conclusively, the intensity of the CM (tight/lenient) is empirically proved to be a condition for different categories of owners to influence the level of EM activities. Hence, the role of FD in reducing the level of EM through OS is more evident when the CM of the sample firms is tight and lenient in the case of accrual and real earnings management, respectively. More precisely, the mediating role of OS in the relationship between FD and EM is contingent on the firms' CM strategies.

4.3 Robustness Checks

We employed some robustness tests by recomputing the discretionary accruals using Larcker & Richardson's (2004) model of accrual EM. Our regression results by using Larcker & Richardson's (2004) are inline with the model using Kasznik's (1999) model for estimating accrual EM (Results are not reported in the paper). Further, we introduced a FD dummy in our final model to verify the effects of FD on EM practices with the mediating role of CG. The coefficients of our FD dummy variables for accrual and real earnings management are -0.77 and -0. 07, respectively. These untabulated results proved robustness to our results in table IV that developed economies are 77% less involved in accrual EM than the developing economies. In contrast, developed economies are 7% less involved in real EM than developing economies. Hence, FD plays a significant role in mitigating EM practices (Enomoto et al., 2018).

5. Conclusion

This paper empirically investigates whether levels of FD in developing and developed countries affect earnings management practices while considering the mediating role of CG attributes based on 6000 firm-year observations from 22 countries from 2008-to 2017. Firstly, our results confirm that both types of EM are constrained in financially developed countries. We conclude that both accrual and real earnings management are negatively affected by a country's level of FD, however, the individual constituent elements of FD such as financial institutional development and financial market development may not affect the level of earnings management likewise. Our results in phase 1 show that financial institutional development significantly affects EM practices due to its role in improving the firm's transparency and disclosure practices and governance

[20] (See Habbash et al., 2010; Wasan & Mulchandani, 2020; Ekadjaja, 2020 among others).

mechanism which, ultimately, affects earnings management. Nevertheless, financial market development has a statistically insignificant impact on EM. Secondly, our results report the significant mediating and moderating role of CG attributes, namely OS and CM in the moderated mediation model used in this research. Managerial and IO are used as proxies of OS and used as mediating variables in the underlying research. The results of our model confirm that IO significantly positively and significantly negatively mediates the level of accrual and real earnings management, respectively. Whereas MO significantly negatively mediates both types of EM practices of the sample firms.

Lastly, the empirical findings of this study substantiate the moderating role of CM (board independence and audit committee independence) in the mediation process of this study by using the moderated mediation model presented by Hayes (2013). This moderation of the CM is negative when EM is measured as real EM. However, it is positive when EM is measured as accrual EM. These results confirm that measures of CM strengthen/weaken the relationship between OS and earnings management practices of the firm in developed and developing economies.

Conclusively, the findings of this study clearly explain that the intensity of the CM (tight/lenient) is empirically proved to be a condition for different categories of owners to influence the level of EM activities of the sample firms. Hence, the role of FD in reducing the level of EM through OS is more evident when the CM of the sample firms is tight and lenient in the case of accrual and real earnings management, respectively. More precisely, the mediating role of OS in the relationship between FD and EM is contingent on the firms' CM strategies.

. Our findings also provide some future implications for practitioners, policymakers, regulators, investors, and corporate managers. Firstly, the findings of this study will provide guidance and some valuable suggestions to practitioners and policymakers to attract potential investors by implementing effective governance strategies to enhance the quality of disclosure practices and ensure the reliability of financial reports. Further, better transparency and disclosure practices will reduce information asymmetry, and EM practices will also be discouraged through proper audit and CM. However, once the reliability of financial statements is obtained, the foreign direct investment of these economies will be increased, and the current and potential shareholders will be more responsive to the firm's financial performance indicators.

Secondly, regulators of less developed countries should focus on improving the general macroeconomic environment of the economy, such as regulatory framework, law and order conditions, political stability and inflation rates, etc., which accelerate the process of FD. Thirdly**,** our findings might be valuable for potential investors in the international markets to formulate better investment portfolios in the presence of EM activities which may affect the potential risk and returns of the stocks. Lastly, regarding corporate managers, our results implicate that they should formulate and implement effective CG strategies to restrict managers from indulging in earning manipulation practices, which destroys the firm value and shareholder wealth, particularly in the long run.

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