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Relationship between Corporate Governance and Earnings Management: Moderating Role of Financial Development

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Abstract: This study empirically investigates the difference between financially developed and developing economies in using accrual and real earnings management practices and the effectiveness of corporate governance policies in reducing such activities across the two types of economies. This paper applies GMM on the panel data of 600 non-financial firms obtained from stock exchanges of financially developed and developing economies for 2008-2017. We found that firms operating in developing economies are more pronounced towards accrual and real earnings management than those in highly developed economies. Additionally, our results confirmed that corporate governance (institutional ownership, managerial ownership, board independence, and audit committee independence) is more effective in mitigating earnings management activities across the two types of economies. However, the association of governance attributes such as institutional ownership and audit committee independence with accrual and real earnings management is weak in the financially developed economies due to better accounting standards, investor protection laws, scrutiny of audit and control mechanism, and the presence of sophisticated market participants. Financial development leads to a reduced level of information asymmetry and agency cost and hence, mitigates the managerial incentives to manage earnings. 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: Corporate Governance, Accrual earning management, Real earning management, Financial development

1. Introduction

The firms' financial reports are considered a reliable and unbiased source of information regarding their financial performance, which indicates the potential gains/losses to the shareholder's wealth (Tabassum

et al., 2013). Managers may induce earning management practices to manage shareholders' expectations in terms of stock prices and get managerial compensations. Earning management is classified as accrual and real earnings management depending on whether it directly affects the level of cash flows of the firm or not? Accrual earning management is the judgmental adjustment in the accounting earnings by choosing alternative accounting principles without directly affecting the firms' cash flows. In contrast, real earning management includes activities that directly affect the firm's cash flows by restructuring the operating and investment activities of the firms.

Initially, Schipper (1989) defined earning management as: *"Purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain"* Another extensive definition of earning management in literature is given as, *"Earnings management is managerial judgment in reporting financial information and in structuring financial transactions to modify financial statements to either mislead firm's stakeholders concerning the annual economic performance or to influence contractual outcomes associated with the reported accounting figures"* (Healy &Wahlen, 1999).

These earning management activities suppress the accuracy and quality of accounting figures reported in the annual financial statements (Latif & Abdullah, 2015). This window dressing of financial statements by the top management obscures some facts that outsiders need to know. It masks the true position of a business entity that in turn mislead shareholders regarding the actual economic performance of the firms (Soliman & Rgab, 2014). Moreover, a series of corporate accounting scandals in the late 1990s and early 20th century have shaken investor confidence in the accuracy of accounting numbers reported in the annual reports. These scandals, coupled with the capital market inefficiencies, raised the question of the integrity and reliability of financial statements (NGO & LE, 2021). Therefore, earnings management has long been a source of concern for accountants and regulators and has gained substantial attention in the accounting and finance literature.

The roots of these financial loopholes may be traced back to the agency theory presented by Jensen & Meckling (1976). This theory revolves around the concept of conflict of interest between the owners and managers of the firms, which becomes apparent due to the separation of ownership and control in the modern corporate world, particularly in large firms where the shareholding is highly dispersed. The opportunistic behaviors by the managers cause inefficient resource allocation, followed by fake and misleading financial statements to disguise the effects of the corporate scandals from the stakeholders and hence, deteriorates the quality of accounting earnings (Johari et al., 2009). Therefore, an effective monitoring and control mechanism, i.e., corporate governance, is essential to restrict the managers engaging in earning management practices.

Corporate governance plays a significant role in ensuring the quality of reported earnings by reducing the earning management (Hsu & Wen, 2015). Corporate governance is defined as "*problems arising due to the separation of ownership and control*" Fernando (2011). Effective governance strategies help to reduce agency conflicts by aligning the interest of owners and managers. Managers are involved in earning management practices and provide fake information in the markets, which induce investors to make decisions based on wrong accounting figures, leading to losses and impair investor confidence. Good governance reduces information asymmetry, improving transparency and disclosure practices, ensuring

a better investment environment, and boosting investor confidence. Several studies have empirically investigated the role of good governance policies in reducing the earning management practices(see for instance NGO & LE, 2021; Kałdoński et al., 2019; Elyasiani et al., 2017; Sakaki et al., 2017; Kamran & Shah, 2014; Soliman & Ragab, 2014; Emamgholipouret al., 2013 among many others).

Several studies documented the significant correlation between earning management and different corporate governance attributes, i.e., managerial ownership.[1], institutional ownership[2] board independence[3]And audit committee independence.[4]in financially developed and developing economies. However, the role of governance mechanisms in reducing earning management is not extensively investigated in developing economies (Ilyas, 2018), particularly concerning financial development. Developing economies are mostly characterized by persistent inflation rates, lack of domestic savings, capital market inefficiencies, and the political and economic instability that suppresses the performance of stock markets. The stock market downturn and fluctuating exchange rates plummet the level of foreign direct investment, which is an obstacle in the development of emerging economies. The financial development of the economies may improve the overall business environment for investors. Hence, the relationship between corporate governance and earning management depends on the economy's financial development and overall macroeconomic environment.

Financial development refers to the development of financial institutions, markets, and the instruments of the markets. Financial development plays an important role in controlling the earning management activities in developed and developing economies (Enomoto et al.,2018). Several other studies investigated the impact of different aspects of financial development on earning management. For instance, a significant association between different dimensions of financial development such as weak regulatory framework and governance structures (González &García-Meca, 2014), investor protection and monitoring mechanism (Francis & Wang, 2008), strong legal protection (Leuz et al., 2003), the national financial accounting standard and institutional development (Bartov et al., 2001) with earning management practices of the firms is documented in the literature.

Financial development ensures the implementation of governance policies by establishing an effective regulatory framework, improved accounting standards, transparency and disclosure practices, as well as efficient audit and monitoring mechanisms (Beck &Levine, 2002). We argue that Financial development may play a significant role in increasing the effectiveness of corporate governance to reduce earning management activities. However, this role of Financial development in the nexus between corporate governance and earnings management is not empirically investigated in the literature. So, it would be

[1] See, for instance, Yeo et al. (2002), Sánchez-Ballesta& Garcia-Mecca (2007), Ali et al.,(2008), Al-Fayoumi (2010), Alves (2012), and O'Callaghan et al.,(2018).

[2] See for instance Velury& Jenkins (2006), Kamran & Shah (2014), Elyasiani et al., (2017), sakakiet al.,(2017) and Kałdoński et al.,(2019).

[3] See, for instance, Beasley (1996), Johari (2009), Marra et al. (2011), Xiong and Ganguli (2014), Alqatan (2019), Wasan&Mulchandani (2020), and Ekadjaja (2020).

[4] See, for instance, Karamanou and Vafeas (2005), Davidson et al., (2005)., Crutchley et al. (2007), Mangena and Chamisa (2008), Baxter & Cotter (2009), Habbash et al. (2010), Pathak et al. (2014), Sun et al. (2014), Soliman and Ragab (2014), and NGO & LE (2021)

interesting to investigate the extent to which corporate governance in financially less developed economies effectively meets the responsibility of monitoring the flaws of the financial reporting process.

Hence, this paper contributes to the literature, firstly, by examining the effectiveness of governance policies in reducing earning management activities in financially developed and developing economies with the presumption that in financially developed economies, this relationship should be weaker than less financially developed economies. A second important contribution of the paper is to investigate the role of financial development in the link between governance systems and earning management. The objective is to examine whether the country's level of financial development strengthens or weakens the association between good corporate governance and earning management practices, which is a relatively ignored area in the existing literature. So, the present study has the following research objectives:

- To validate the relationship between corporate governance and earnings management in developed and developing economies.
- To compare the effectiveness of good governance in reducing earning management practices in developed and developing economies.
- To examine the moderating role of financial development in existing corporate governance-earning management relationships.

To cater these objectives, we proposed an empirical model which includes measures of financial development (moderator), corporate governance (independent variable) and earning management (dependent variable) and a set of control variables. Financial development index (FDI) by IMF is used as indicator of a country's level of financial development in our model. For measuring corporate governance, we used ownership structure and control mechanism. Further, accrual and real earning management are used as proxies of earning management. We used Larcker & Richardson (2004) and Roy chowdhury (2006) model for the estimation of accrual and real earnings management, respectively. The Generalized Method of Moments (GMM) is used to estimate the model at firm level analysis of developing and developed economies.

We found that the firms operating in the developing economies are more engaged in accrual and real earning management practices as compared to those operating in the developed economies. This may be attributed to the agency problem arising from the information asymmetry and ineffective audit and control mechanisms in the developing economies. Additionally, our results confirmed that corporate governance is effective in mitigating earnings management activities across the two types of economies. However, this negative association of governance attributes with accrual and real earnings management is weak in the financially developed economies implying the importance of financial development.

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.

2. Literature Review

The inconclusive role of corporate governance in devising the earning management behavior of executives is a subject of continuing interest for researchers of developing and developed economies.

Accrual and real earning management are the significant approaches used by the managers to upsurge the reported accounting earnings through judgmental adjustments in discretionary accruals and structuring various business transactions. Effective governance mechanism is essential to limit myopic managerial behavior and ensure reliability and informativeness of financial reports. In this context, several studies including (Karamanou and Vafeas, 2005; Saleh et al., 2005; Liu & Lu, 2007; Bekiris & Doukakis, 2011; Chen et al., 2007; Alqatan, 2019; Wasan & Mulchandani,2020; Ekadjaja, 2020) have endeavored to explain the relationship between corporate governance and earnings management, and they came up with mixed and contradictory results.

Further, some prior studies have provided evidence on the influential role of corporate governance in improving the quality of accounting earnings reported by the firms and boosting the investor's confidence in the earnings reported by the firms. (González and García-Meca, 2014). Specifically, ownership structure, an effective corporate governance mechanism, is a substantial source to control earning management practices (Alves, 2012; Sakaki et al., 2017; O'Callaghan et al.,2018; Kałdoński et al., 2019).

Two important attributes of corporate governance used in literature are ownership structure and control mechanism. Further, two proxies of ownership structure widely used in literature are managerial ownership and institutional ownership. As far as managerial ownership is concerned, researchers have contradictory (positive/negative) results regarding the impact of managerial ownership on earning management. Numerous studies confirmed the positive effects of managerial ownership on earning management, supporting the entrenchment effect hypothesis presented by Morck et al. (1988). The entrenchment effect is systematically linked with the agency problem. It implies that the largest share of insiders (managers) in the company's ownership structure would reinforce their discretionary power and control over financial decisions and lead to their self-serving behaviors, which eventually causes losses to the stockholders. Therefore, it is believed that a higher level of managerial ownership would ultimately strengthen the process of earning management (Yeo et al., 2002; Teshima&Shuto, 2008; Al-Fayoumi, 2010).

In contrast, Ali et al. (2008), Alves (2012), and O'Callaghan et al. (2018) presented the argument consistent with the incentive alignment effect by Jensen &Meckling (1976). The incentive alignment effect hypothesis asserts that managerial ownership is a monitoring mechanism to assimilate the divergence of interest between managers and shareholders. Their results confirmed the negative relationship between managerial ownership and earning management.

Moreover, the literature is enriched with evidence on the association between institutional investors and managerial discretionary earnings management practices. (Kałdoński et al., 2019; Enomoto et al., 2018; Elyasiani et al., 2017; Sakaki et al., 2017; Kamran & Shah, 2014; Emamgholipour et al., 2013; Charitou, 2007; Velury& Jenkins, 2006; Koh, 2005; Leuz et al., 2003). Initially, Pound (1988) identifies the implication of institutional ownership in smoothing the earning management process of the firms. The center of attention in this study was to determine the role of institutional investors in varying the managerial intention towards managing discretionary earnings. Hence, they developed three different hypotheses to explain the concurrent relationship between institutional investors and earning

management: the monitoring hypothesis, the strategic alignment hypothesis, and the conflict of interest hypothesis. The monitoring mechanism hypothesis states that institutional investors tighten the monitoring and control over myopic managerial actions and hence negatively related to earnings management practices. In this context, many studies documented the negative association between institutional investors and earning management (Bushee, 1998; Bange& de Bondt, 1998; Rajgopal et al., 1999; Chung et al., 2002; Koh, 2003; Mitra&Cready, 2005; Roychowdhury, 2006; Farooq & El Jai, 2012; Lin et al., 2014 Kamran & Shah, 2014; Elyasiani et al., 2017; Sakaki et al., 2017; Kałdoński et al., 2019).

The second hypothesis of strategic alignment infers that institutional investors make an alliance with the executive managerial positions and realize their benefits at the stake of minority shareholders. Particularly, when the ownership of the firms is highly concentrated, the large blocks of investors can more easily access the private information which is not publically traded and grasp their private benefits by exploiting the wealth of minority shareholders (Kim, 1993). Whereas, the conflict of interest hypothesis asserts that in the situations of disagreements between different investment groups, institutional investors frequently favor top management, which ultimately raises value-destroying activities of the managers. However, numerous studies documented the evidence on the positive relationship between institutional investors and level of earning management, supporting the argument of strategic alliance and conflict of interest hypothesis (Velury& Jenkins, 2006; Hashim& Devi, 2008; Cheng and Reitenga, 2009; Moradi and Nezami, 2011; Lin and Manowan, 2012; Salajeghe et al., 2012; Emamgholipour, 2013).

In literature, the control mechanism in the firms is measured by board independence and audit committee independence, among other measures. Board independence is the extent to which board members are not affiliated with managers and shareholders, and the board is not dominated by the executive members (Abdullah, 2001). Alzoubi and Selamat (2012) documented that boards comprising a large proportion of non-executive directors have a better capacity to monitor and control managerial activities. This monitoring power of independent boards reduces the agency conflict inherent in the firm and improves annual earnings' informativeness (Dimitropoulos and Asteriou, 2010). Furthermore, Fama and Jensen (1983) reported that the autonomous and independent positions of the board of directors would intensify their role in monitoring and controlling the executives and protecting stakeholders' interests.

Audit committee independence is the other widely used proxy for control mechanisms in literature to investigate the impact of corporate governance on earnings management. Several studies observed the significant role of the independent audit committee in devising the earning management behavior of the management (Beasley et al., 2000; Carcello and Neal, 2000; Klein, 2002; Park & Shin, 2003; Xie et al., 2003; Bedard et al., 2004; Kinney et al., 2004; Kao & Chen, 2004; Abbott et al., 2004; Choi et al., 2004; Karamanou and Vafeas, 2005; Davidson et al., 2005; Crutchley et al., 2007; Mangena and Chamisa, 2008; Baxter & Cotter, 2009; Habbash et al., 2013; Pathak et al., 2014; Soliman and Ragab,2014). They assert that independent audit committees have substantial power to implement financial regulations to oversee the unethical managerial action regarding manipulating accounting numbers in the company's annual financial reports. Based on the predictions of agency theory, which, discussed the misalignment of

interest between owners and managers and the review of the existing literature, we may argue that corporate governance attributes may significantly influence the level of earning management practices., Hence, we proposed the following hypotheses;

H_{1a}: Managerial ownership is significantly positively/negatively associated with the level of earnings management.

H_{1b}: Institutional ownership is significantly positively/negatively associated with the level of earnings management.

H_{1c}: Board independence is significantly negatively associated with the level of earnings management

H_{1d}: Audit committee independence is significantly negatively associated with the level of earnings management.

Keeping in view the contradictory findings of corporate governance-earning management relationships, the influential role of a country's level of financial development cannot be overlooked in modifying this established relationship. Financial accounting, along with regulatory systems, facilitates the decision making process by providing investors with useful information to strengthen the development process in the country (Enomoto et al., 2018). However, the financial development does not guarantee the quality of accounting information as the major accounting scandals of the world's leading economies, including the UK (Tesco), USA (WorldCom and Enron), Japan (Olympus), Canada (Biovail), and Australia (One. Tel) raised the question on their prevailing financial systems and accounting standards. This resulted in the implementation of the Sarbanes Oxley act 2002 (Joosten, 2012). This Act was an immediate attempt to revise their audit and control systems, ensuring the transparency of their financial statements and enhancing their regulatory and corporate governance mechanisms. The goal of Sox was to reduce the prospect of accounting scandals arising in the future (Enomoto et al., 2018).

However, these accounting scandals proved the association between financial development and financial accounting regulation, ultimately improving earning quality. In this context, Enomoto et al. (2018) contend that accrual and real earnings management are controlled by the country's higher level of financial development. Further, several studies confirmed the role of different aspects of financial development such as investor protection and monitoring mechanism (Francis & Wang, 2008), property right protection (La Porta et al., 1999; Denis and McConnell, 2003; Mintz, 2005; Boubakri et al., 2005), industry audits (Jaggi et al., 2012), institutional development (Bartov et al., 2001), information asymmetry (Abad et al., 2018), transparency and disclosure practices (Jo &kim, 2017) and financial distress (Jiang et al., 2011; Cao &Petrasek, 2014) in controlling the earning management behaviors of the managers and improving the quality of reported earnings. Though many researchers have empirically investigated the role of financial development in mitigating earning management practices, however, this relationship has not yet been thoroughly investigated in the context of developed and developing economies. Further, the phenomenon of corporate governance, financial development, and earning management have not been discussed simultaneously in earlier literature. Therefore, the present study proposed the following hypothesis;

H_2: Financial development significantly moderates the relationship between corporate governance and earnings management.

3. Research Design

3.1 Population, Sample, and data

The population of this study consists of the firms of developing and developed economies of the world. After doing the missing value analysis of our data, we included 600 non-financial firms listed on stock exchanges of 22 countries with the complete market and firm-specific information regarding corporate governance and earning management variables. The financial sector of the sample countries was ignored as financial firms differ from other firms in terms of the preparation of financial statements, among other characteristics (La Porta et al., 2002). We obtained the data of sample firms from 2008 to 2017 for the underlying study. Initially, this comprises a total of 6000 firm-year observations, which was reduced to 4800 in the final sample as we used 2007 and 2008 as lag years to measure accrual and real earnings management. As the analysis of the current study is based on the comparison of financially developed and developing economies in earning management practices, we have classified our sample countries into two groups.[5]This classification was based on the financial development index (FDI) developed by IMF[6]. The data for estimating corporate governance and earnings management has been collected from the firm's annual financial reports, companies' respective websites, stock exchanges of sample countries, etc.

Following the literature, we applied the Generalized Method of Moments (GMM) analysis technique[7] on panel data to control the endogeneity of the variables and autocorrelation. Estimation with OLS may result in a misspecification error[8].So, to overcome this potential problem, we employed difference GMM as our estimation method, which includes the first lag of outcome variables in the level equation and lagged values of outcome and explanatory endogenous variables as instrumental variables in the regression analysis (Arellano & Bond, 1991; Arellano-Bover, 1995).

3.2 Earning Management Measures

Earning management is a tool used to manipulate reported earnings which encompass the creative use of different accounting standards to promote opportunistic behaviors of the managers particularly, in the absence of strong governance mechanisms and regulatory systems in the country

[5]Switzerland, Canada, U.K, U.S.A, Australia, Spain, Japan, France, Sweden, Italy, Hong Kong, Thailand, Malaysia, China, and Brazil are listed as financially developed countries whereas, Pakistan, India, Poland, Turkey, Russia, Israel, and Indonesia are listed as financially developing countries.

[6]We used five years average (2013-2017) of FDI published by the IMF for developed and developing countries. Countries with FDI of above 6.0 are considered highly developed, and countries with FDI below 6.0 are considered less developed economies.*(Data retrieved from the website, https://data.imf.org/?sk=F8032E80-B36C-43B1-AC26-493C5B1CD33B).*

[7]To test whether GMM is appropriate, we applied a number of tests before doing regression analysis such as VIF to test multicollinearity, Bruesch Pagan test for heteroskedasticity, Hansen j statistics for over-identification of instruments (See Hansen, 1982 for details), and Arellano & Bond test for serial correlation (Arellano & Bond, 1991 for details).

[8]see linear dynamic panel data estimation by Arellano & Bond (1991).

(Islam et al., 2011). The current study uses two earning management measures, namely accrual earning management and real earning management.

An extensive review of extant literature reveals that prior researchers have applied various models to detect accrual earning management activities. Two widely discussed proxies to measure earning management are total accruals and discretionary accruals. Total accruals are the sum of discretionary and non-discretionary accruals of the firm. These total accruals are estimated as the difference between the net income and the operating cash flows of the firm, which can be either calculated by using balance sheet approach or the cash flow approach (Healy, 1985; DeAngelo, 1986; Mohanram, 2003; Firth et al., 2007b; Shah et al., 2009; Habbash, 2010; Nazir, 2016). However, several studies used the cash flow approach, which is highly recommended due to the accuracy and reliability of its results (Collins and Hriber, 2000; Habbash, 2010). Hence, this study will use the cash flow approach for calculating the total accruals.

Discretionary accruals are a widely used proxy to measure earning management practices calculated as the difference between total accruals and non-discretionary accruals(Ashbaugh et al., 2003; Ilyas, 2018). However, Following Pornupatham (2006), Habbash (2010), Xiaoqi (2013), Nazir (2016), and Ilyas (2018). The present study is also considering discretionary accruals as a proxy to detect earning management.

There are different measurement models to compute accrual earning management, including Jones (1991) model, modified Jones models by Dechow et al. (1996) model, Kasznik (1999) model, Larcker & Richardson (2004) model, Kothari et al. (2005) model, and Yoon et al. (2006) model. Initially, Jones (1991) presented a model to measure the non-discretionary accruals and reported that the discretionary portion of total accruals could serve the objective to detect accrual earning management.

$$TACC_{ijt} = \alpha_0 \left(\frac{1}{Assets_{ijt-1}}\right) + \alpha_1(\Delta REV_{ijt}) + \alpha_2(PPE_{ijt}) + \varepsilon_{ijt} \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where,

$TACC_{ijt}$= Total Accruals

$Assets_{ijt-1}$ = Lagged value of total assets

ΔREV_{ijt}= Change in revenue

PPE_{ijt}= Gross property, plant and equipment

$\alpha_{0\text{-}n}$=Parameters of the models

ε_{ijt} = Residuals of the model

Subscript i, j, and t refers to the firm, country, and time, respectively

All variables are to be scaled by lagged values of total assets $\left(\frac{1}{Assets_{ijt-1}}\right)$

Subsequently, Dechow et al. (1996) assert that the cross-sectional model developed by Jones (1991) is very simple and less efficient in explaining the variation in total accruals and hence presented a Modified Jones Model as follows:

$$TACC_{ijt} = \alpha_0\left(\frac{1}{Assets_{ijt-1}}\right) + \alpha_1\left(\Delta REV_{ijt} - \Delta REC_{ijt}\right) + \alpha_2\left(PPE_{ijt}\right) + \varepsilon_{ijt} \ldots\ldots\ldots (2)$$

Where,

ΔREC_{ijt} = Change in receivables

$\alpha_{0\text{-}n}$ = Estimated parameters of the models

ε_{ijt} = Residuals of the model

Subscript i, j, and t refers to the firm, country, and time, respectively

All variables are to be scaled by lagged values of total assets $\left(\frac{1}{Assets_{ijt-1}}\right)$

However, Kasznik (1999) proposed a new model by criticizing Dechow et al. (1996). Their model lacks the effect of cash flow variations and causes miss specification in estimating the value of abnormal accruals. He made variations in Dechow et al. (1996) model as follows:

$$TACC_{ijt} = \alpha_0\left(\frac{1}{Assets_{ijt-1}}\right) + \alpha_1\left(\Delta REV_{ijt} - \Delta REC_{ijt}\right) + \alpha_2\left(PPE_{ijt}\right) + \alpha_3\left(\Delta OCF_{ijt}\right) + \varepsilon_{ijt} \ldots\ldots\ldots\ldots\ldots (3)$$

Where:

ΔOCF_{ijt}= Change in operating cash flows

$\alpha_{0\text{-}n}$= Estimated parameters of the models

ε_{ijt} = Residuals of the model

Subscript i, j, and t refers to the firm, country, and time, respectively

All variables are to be scaled by lagged values of total assets $\left(\frac{1}{Assets_{ijt-1}}\right)$

Further, Larcker and Richardson (2004) modified the Kasznik (1999) model by adding the growth factor along with the OCF to incorporate the effects of abnormal accruals in the model. This growth factor is calculated by the book to market ratio to explain the firm's expected growth rate, which otherwise can be chosen as discretionary accruals and can be a source of earnings management. Larcker and Richardson (2004) claim that their model is more effective with greater explanatory power, which is as follows:

$$TACC_{ijt} = \alpha_0\left(\frac{1}{Assets_{ijt-1}}\right) + \alpha_1(\Delta REV_{ijt} - \Delta REC_{ijt}) + \alpha_2(PPE_{ijt}) + \alpha_3\left(Growth_{ijt}\right) + \alpha_4\left(\Delta OCF_{ijt}\right) + \varepsilon_{ijt} \ldots\ldots\ldots\ldots\ldots\ldots (4)$$

Whereas:

$Growth_{ijt}$=Expected growth rate

$\alpha_{0\text{-}n}$= Estimated parameters of the models

ε_{ijt}= Residuals of the model

Subscript i, j, and t refers to the firm, country, and time, respectively

All variables are to be scaled by lagged values of total assets $\left(\frac{1}{Assets_{ijt-1}}\right)$

Further, Beslic et al. (2015) reported that the models existing in the literature for measurement of earnings management have less explanatory power for estimating accruals, hence these models are not reliable in terms of accuracy and validity of results. Therefore, they recommended further modification in the earning management models. They proposed the performance-matched model to alleviate the misspecification error that arises due to the significant association of non-discretionary accruals of the firm with its past performance (Barth et al., 2001; Dechow et al., 1995; Healy, 1996). Therefore, they demonstrated that they developed a well-specified model that considers the factors causing performance shocks. Performance matched model is more powerful as matching in this model is done based on industry and return on assets to control the expected association of accruals with the performance of the firms. Firms with good earning capacity have frequent positive earning shocks and, in turn, lead to positive values of discretionary accruals and vice versa (McNichols, 2000). These will produce heteroscedasticity and other critical errors to the measurement of Jones, Modified Jones, and their other modified versions. Therefore, they suggested that accruals can be calculated either by taking ROA or the lagged value of ROA by using the modified Jones model. Moreover, the matching process can also adjust the discretionary accruals by matching the two firms' current or previous year ROA in the same industry(Kothari et al., 2005). Further, they concluded that discretionary accruals could be calculated by using the performance-matched model proposed by Kothari et al. (2005);

$$TACC_{ijt} = \alpha_0 \left(\frac{1}{Assets_{ijt-1}}\right) + \alpha_1(\Delta REV_{ijt} - \Delta REC_{ijt}) + \alpha_2(PPE_{ijt}) + \alpha_3 (ROA_{ijt-1}) + \varepsilon_{ijt} \ldots\ldots\ldots\ldots\ldots (5)$$

Whereas:

ROA_{ijt-1}=Lagged value of firm measured by return on assets

$\alpha_{0\text{-}n}$= Estimated parameters of the models

ε_{ijt}= Residuals of the model

Subscript i, j, and t refers to the firm, country, and time, respectively

All variables are to be scaled by lagged values of total assets$\left(\frac{1}{Assets_{ijt-1}}\right)$

Moreover, the literature reveals that Modified Jones Model (1995) is the most commonly used model and preferred by modern researchers to detect earnings management. However, Yoon and Miller (2002) and Yoon et al. (2006) further modified this model based on the argument that this model does not fit Asian developing economies and is good for western developed economies. Moreover, Islam et al. (2011) confirmed their findings by applying both models to Bangladeshi firms. He asserts that Yoon et al. (2006) model increases the explanatory power of accruals up to 84%, which was only 9% in the Modified Jones Model (1995). Yoon et al. (2006) model for discretionary accruals is as follows:

$$TACC_{ijt} = \alpha_0 + \alpha_1(\Delta REV_{ijt} - \Delta REC_{ijt}) + \alpha_2(\Delta EXP_{ijt} - \Delta PAY_{ijt}) + \alpha_3 (\Delta DEP_{ijt} - \Delta RET_{ijt}) + \varepsilon_{ijt} \ldots\ldots\ldots\ldots\ldots (6)$$

Where,

ΔEXP_{ijt}= Change in expenditures (Exp+ cost of goods sold - operating expenses excluding non-cash expenses)

ΔPAY_{ijt}= Change in payables

ΔDEP_{ijt}=Change in depreciation

ΔRET_{ijt} = Change in retirement benefits for employees by firm i time t

$\alpha_{0\text{-}n}$= Estimated parameters of the models

ε_{ijt}= Residuals of the model

Subscript i, j, and t refers to the firm, country, and time, respectively

All variables are to be scaled by lagged values of total assets $\left(\frac{1}{Assets_{ijt-1}}\right)$

The present study estimated models from 1-6 by using pooled OLS regression analysis technique. All the fitted values of the regression line for models 1-6 will be the values of non-discretionary

accruals. However, the discretionary portion of total accruals was considered the residuals (ε_{ijt}) of these models. Then, the absolute values of these accruals were used as proxies of accrual earning management. The present study is cross-sectional, and analysis was done using panel data from developing and developed economies. Therefore, to estimate discretionary accruals, we run pooled regression on models 1-16. Then the model with the highest explanatory power(adjusted R^2) will be used to detect earnings management (Sireger & Utama, 2008).

Table 3.1: Estimation Methods of Accrual Earning management

Variables	Jones (1991)	Dechoe et al. (1996)	Kasznik (1999	Larcker & Richardson (20	Kothari et al. (200	Yoon et al. (2006)
Constant						-1.37E+08
						(-5.369057)***
$1/Assets_{ijt-1}$	-30438.2100	-30160.78	-28649	-24274.09	-23993.89	
	(-	(-12.32784)***	(-13.27569)***	(-11.13487)***	(-8.119325)***	
ΔREV_{ijt}	0.2798					
	(21.23823)***					
$\Delta REV_{ijt} - \Delta REC_{ijt}$		-0.002044	0.013437	0.015496	-0.002062	-0.187885
		(-0.443894)	(3.293805)***	(3.769963)***	-0.448808	(-8.420365)***
PPE_{ijt}	-0.0770	-0.07183	-0.06368	0.006576	-0.073734	
	(-25.04245)***	(-22.29411)***	(-22.35064)***	(1.907812)**	(-22.54306)***	
ΔOCF_{ijt}			-0.593313			
			(-39.07807)***			
$Growth_{ijt}$				37.97527		
				(3.214599)***		
OCF_{ijt}				-0.46378		
				(-39.32688)***		
ROA_{ijt-1}					113.378	
					(3.735281)***	
$\Delta EXP_{ijt} - \Delta PAY_{ijt}$						-0.000437
						-0.051646
$\Delta DEP_{ijt} - \Delta RET_{ijt}$						-0.008403
						-0.429878
Wald chi-Square	1379.412***	335.5007***	2628.042***	2731.058***	350.1466***	102.4232***
Adjusted R²	0.1008	0.0249	0.2417	0.2505	0.0271	0.0202

Notes: Each coefficient in models 1 and 2 represents the Change in earnings management based on a one-unit change in the determinant; t values are in the parenthesis. *, **, *** indicates the significance level at 10%, 5%, and 1% respectively. Wald Chi-Square indicates the joint significance on the coefficients of the models, whereas adjusted R^2 shows the explanatory power of the models reported in the table.

The residuals of models 1-6 are reported in table 1. These results are further used for the measurement of accrual earning management. Our tabulated results show that the Adjusted $R^2$of Larcker & Richardson's (2004) model for estimating discretionary accruals is 25.05%, the highest value among all six aggregate accrual models. The predictive power of the Larcker & Richardson (2004) model is even better than the widely used Jones (1991) model, modified Jones (1996) model, Kothari et al. (2005), and Yoon et al. (2006). The value of adjusted R^2 is also slightly greater than Kasznik (1999), which also accounts for the variations in the firm's cash flows. Hence, the residuals predicted by Larcker& Richardson's (2004) model are used as a proxy of accrual earning management in the further analysis of this study.

The dependent variables of the present study, such as accrual earning management and real earning management, contain multiple lag values. So, endogeneity might arise, which may lead to biased and unreliable results estimated by using OLS. Pooled OLS is not an appropriate technique for our model as it ignores the unobservable heterogeneity and endogeneity issues. In this context, some researchers used panel regression with random effect and fixed-effect models followed by the Hausman test. Though fixed-effect models can solve the heterogeneity issues, it does not account for the endogeneity problem. However, to deal with the endogeneity issue, which may cause autocorrelation between the residuals of lagged dependent variables, we applied the generalized method of moment (GMM), which is the appropriate technique for further analysis of the present study. Hence, the residuals of the Larcker and Richardson's (2004) model were estimated using GMM, which was the best-fitted model for accrual earnings as per the criteria of adjusted R^2.

In the context of real earning management, literature reported three methods for measurement using Sales Manipulation, Reduction in discretionary expenses, and over-Production (Roychowdhury,2006; Cohen et al., 2008; Cohen and Zarowin, 2010; Enomoto et al., 2018). For measuring real earning management, pooled OLS has been run three models mentioned below by taking an abnormal level of operating cash flow CFO, discretionary expenses, and production cost.

$$OCF_{ijt} = \beta_0 + \beta_1\left(\frac{1}{Assets_{ijt-1}}\right) + \beta_2(Sales_{ijt}) + \beta_3(\Delta Sales_{ijt}) + \varepsilon_{ijt} \ldots\ldots\ldots\ldots (7)$$

$$DE_{ijt} = \beta_0 + \beta_1\left(\frac{1}{Assets_{ijt-1}}\right) + \beta_2(Sales_{ijt}) + \varepsilon_{ijt} \ldots\ldots\ldots\ldots\ldots\ldots (8)$$

$$PROD_{ijt} = \beta_0 + \beta_1\left(\frac{1}{Assets_{ijt-1}}\right) + \beta_2(Sales_{ijt}) + \beta_3(\Delta Sales_{ijt}) + \beta_3(\Delta Sales_{ijt-1}) + \varepsilon_{ijt} \ldots (9)$$

Where,

OCF_{ijt} =Operating Cashflows

DE_{ijt}= Discretionary Expenses (General + Administrative)

$PROD_{ijt}$ = Production cost (Cost of Goods sold + Change in Inventory)

$Sales_{ijt}$= Current level of Sales

$\Delta Sales_{ijt}$= Change in sales

$\beta_{0\text{-}n}$ = Estimated parameters of the model

ε_{ijt} = Residuals of the model

Subscript i, j, and t refer to the firm, country, and time, respectively.

All variables are to be scaled by lagged values of total assets $\left(\frac{1}{Assets_{ijt-1}}\right)$

By applying pooled OLS regression analysis technique for equations 7-9, we used the residuals of these models as the values of OCF, DE, and PROD, respectively. Then after taking the absolute values of these three proxies, we will use them to capture the effect of REM for the onward analysis of the current study. Further, we multiplied the absolute values of OCF and DE with a negative one and then added to the absolute value of PROD for calculating the aggregate effect of REM (Enomoto et al., 2018; Cohen and Zarowin, 2010).

$$REM_{ijt} = (OCF_{ijt})(-1) + (DE_{ijt})(-1) + (PROD_{ijt}) \dots\dots\dots (10)$$

3.3. The Econometric Model

The present study intends to investigate the moderating role of financial development[9] in the existing relationship between corporate governance[10] and earnings management[11]. For this purpose, we used the following models to investigate the research objective of this study:

$$\begin{aligned} AEM_{ijt} = {} & \alpha_0(MAN\_OS_{ijt}) + \alpha_1 INS\_OS_{ijt} + \alpha_2(BI_{ijt}) + \alpha_3(ACI_{ijt}) + \alpha_4(DFD_{jt}) \\ & + \alpha_5(MAN\_OS_{ijt} * DFD_{jt}) * + \alpha_6(INS\_OS_{ijt} * DFD_{jt}) + \alpha_7(BI_{ijt} * DFD_{jt}) \\ & + \alpha_8(ACI_{ijt} * DFD_{jt}) + \alpha_9(Control_{ijt-1}) + \Sigma(Year\_Fixed\_Effect) \\ & + \Sigma(Firm\_Fixed\_Effect) + \varepsilon_{ijt} \dots\dots\dots\dots\dots\dots\dots\dots\dots (11) \end{aligned}$$

$$\begin{aligned} REM_{ijt} = {} & \alpha_0\left(MAN_{OS_{ijt}}\right) + \alpha_1 INS_{OS_{ijt}} + \alpha_2(BI_{ijt}) + \alpha_3(ACI_{ijt}) + \alpha_4(DFD_{jt}) \\ & + \alpha_5\left(MAN_{OS_{ijt}} * FD_{jt}\right) * + \alpha_6\left(INS_{OS_{ijt}} * DFD_{jt}\right) + \alpha_7(BI_{ijt} * DFD_{jt}) \\ & + \alpha_8(ACI_{ijt} * DFD_{jt}) + \alpha_9(Control_{ijt}) + \Sigma\left(Year_{Fixed_{Effect}}\right) + \Sigma\left(Firm_{Fixed_{Effect}}\right) \\ & + \varepsilon_{ijt} \dots\dots\dots\dots\dots\dots\dots\dots\dots (12) \end{aligned}$$

Whereas;

AEM_{ijt} = Accrual earning management

REM_{ijt} = Real earning management

$MAN_{OS_{ijt}}$ = Managerial ownership

$INS_{OS_{ijt}}$= Institutional ownership

BI_{ijt}= Board independence

[9] We used the aggregate index of financial development (Financial institutional development + Financial market development) by IMF

[10] For this purpose, we considered four different mechanisms of corporate governance grouped into two categories, i.e., Ownership structure, which includes managerial ownership and institutional ownership and control mechanism, which includes board independence and audit committee independence

[11] Accrual earning management and Real earning management are the proxies of earning management.

ACI_{ijt}= Audit committee independence

DFD_{jt}= Dummy for financial development

$Control_{ijt}$= Control variables including Leverage ratio(Debt to Equity ratio), Size, MTB, and ROA

$\varepsilon_{ijt} =$ Residuals of the model

Subscript i, j, and t refer to the firm, country, and time, respectively.

In models 11 and 12, AEM and REM are used as estimated by model 4 and model 10. Further, we have included some control variables which may affect the level of accrual and real earnings management, such as firm size, leverage, market to book ratio, and return on assets to obtain the unbiased estimates of the model(Becker et al., 1998; DeFond&Jiambalvo,1994; Roychowdhury, 2006; Gunny, 2010; Nazir, 2016; Enomoto et al., 2018). Moreover, consistent with DeGeorge et al. (2013), we have added year fixed effect and firm fixed effect coefficients in our model to control the year and firm effects, respectively.

4. Results and Discussion

4.1 Descriptive Analysis

Overall summary of descriptive statistics for financial development, accrual earning management, and real earning management are reported in table ii, categorized in highly developed and less developed countries based on their financial development index. Country-wise analysis of accrual and real earnings management has been performed using an independent sample t-test. Table ii indicates the mean comparison of accrual earnings management and real earnings management practices in highly developed and less developed countries. The upper panel of the table provides mean values of accrual and real earnings management in highly developed countries. In contrast, the lower panel provides mean accrual and real earnings management values in less developed countries.

Table 4.1: Descriptive Statistics

	AEM			REM			
	Highly Developed Countries (FDI greater than 0.6)						
Country	**N**	**Mean**	**Std. Deviation**	**N**	**Mean**	**Std. Deviation**	**Average FDI**
Switzerland	117	0.049	0.081	58	0.13	0.699	0.95
Canada	450	0.047	0.122	261	0.11	0.42	0.89
United Kingdom	387	0.043	0.043	224	0.07	0.3	0.89
United States	450	0.038	0.045	290	0.08	0.312	0.89
Australia	351	0.044	0.095	193	0.08	0.315	0.88
Spain	144	0.040	0.066	55	0.08	0.266	0.88
Japan	90	0.040	0.039	51	0.03	0.036	0.87
France	450	0.035	0.037	222	0.06	0.225	0.78
Sweden	126	0.031	0.029	75	0.06	0.247	0.78
Italy	144	0.034	0.033	68	0.03	0.048	0.77
Hong Kong	441	0.048	0.063	272	0.04	0.069	0.76
Thailand	99	0.036	0.065	49	0.06	0.116	0.73
Malaysia	261	0.060	0.038	161	0.28	1.152	0.66
China	360	0.042	0.066	188	0.22	1.268	0.63
Brazil	184	0.049	0.051	115	0.04	0.055	0.62
Total	4054	0.042	0.0582	2282	0.09	0.369	0.80
Less Developed Countries (FDI less than 0.60)							
Country	**N**	Mean	Std. Deviation	N	Mean	Std. Deviation	FDI Average
Israel	**87**	0.055	0.046	54	0.21	1.275	0.57
Turkey	**117**	0.051	0.049	66	0.20	1.129	0.52
Russia	**153**	0.056	0.063	72	0.12	0.512	0.48
Poland	**90**	0.056	0.059	38	0.26	0.951	0.47

India	**355**	0.060	0.193	185	0.27	1.644	0.42
Indonesia	**153**	0.050	0.048	84	0.38	1.803	0.36
Pakistan	**331**	0.085	0.085	214	0.27	0.931	0.23
Total	**1286**	0.059	0.078	713	0.24	1.178	0.44
Mean Differences	**0.017**			0.15			
t- values	**-4.010*** **			-4.52***			

Notes: This table presents the country-wise descriptive analysis of accrual and real earning management of financially developed and developing countries using an independent sample t-test. The upper panel of the table indicates the mean values of accrual and real earnings management in developed countries. The lower panel of the table shows the mean values of accrual and real earnings management in developing countries. F value indicates the significance of the mean difference between developed and developing countries.

As evident by tabulated results of the upper panel, Malaysian firms are highly involved in accrual earning management (with a mean value of 0.060), and Sweden firms are less involved in accrual earning management (with a mean value of 0.031) among the highly developed countries. Further, it is clear from the lower panel of table ii that Pakistan has the highest rank (with a mean value of 0.085) in accrual earning management. In contrast, Indonesia is at the lowest rank (with a mean value of 0.050). We can also conclude from table ii that, on average, developing economies are 71% more engaged (with a mean value of 0.059) than developed economies (with a mean value of 0.042) in income-increasing accrual earning management. These discretionary accruals are estimated by residuals of the accrual method proposed by the Larcker & Richardson (2004) model.

Moreover, table ii reveals some facts regarding the real earning management of the sample firms. As in accrual earnings, Malaysian firms are highly engaged in real earnings management (with a mean value of 0.28). In contrast, Italian and Japanese firms (with a mean value of 0.3 for both) are less engaged in real earning management among highly developed economies. In the case of less developed economies, Indonesian firms (with a mean value of 0.38 are highly using real earning management tools to manage earnings and Russia (with a mean value of 0.12) is at the lowest level in this perspective. On average, less developed economies (with a mean value of 0.24) are 37% more escorted with real earning management as compared to the highly developed economies (with a mean value of 0.09) as estimated by residuals of models proposed by Roychowdhury (2006).

4.2 Empirical Analysis

Results of table iii are obtained from GMM estimates of model 11 and model 12. These results illustrate the impact of corporate governance and financial development on earning management. Results of Table iii indicate the impact of corporate governance attributes such as institutional ownership, managerial ownership, board independence, and audit committee independence on accrual and real earnings management with the moderating effect of level of financial development. These results

illustrate that institutional ownership positively affects the level of discretionary accrual, and these results are consistent with the hypothesis of conflict of interest and strategic alignment. These results support the argument that in case of disagreement between different shareholders and management of the company, institutional shareholders make an alliance with management and support their opportunistic earnings management behavior[12]. By conjoining with top management, institutional investors realize their benefits at the stake of minority's interest which, further causes the situation of disagreement between the parties (Kim, 1993; Moradi and Nazami, 2011; Lin and Manowan, 2012; Salajeghe et al., 2012; Emamgholipour, 2013; Hsu & Wen, 2015; Latif & Abdullah, 2015). In the case of real earnings management, we found that institutional owners help reduce the firms' earning management practices. These results align with the monitoring mechanism hypothesis, which asserts that institutional owners can strictly control managerial activities. Hence, their presence can mitigate the probability of real earning management. Prior studies including Kamran & Shah (2014), Hsu & Wen (2015), Elyasiani et al. (2017), Sakaki et al. (2017), and Kałdoński et al. (2019) have also reported similar results.

Table 4.2: The effect of Financial Development on the Relationship between Corporate Governance and Earning Management

[12]Earning management practices that management used for their private gains are called opportunistic earning management.

Variables	AEM	REM
AEMijt-1	0.038833	_
	(1.224177)**	_
REM ijt-1	_	-0.40723
	_	(-4.136013)***
Managerial Ownership	-0.00969	-0.983614
	(-8.01722)***	(-1.15644)*
Institutional Ownership	0.001649	-0.000998
	(4.366552)***	(-2.13446)**
Board Independence	-0.000102	-0.001882
	-0.830061	(-1.69768)**
Audit Committee Independence	-0.001117	-0.008134
	(-3.77783)***	(-3.15984)***
Financial Development Dummy	-0.776844	-0.06316
	(-3.17387)**	(-2.09249)***
Managerial Ownership*Financial Development Dummy	-0.040665	1.329915
	(-1.38119)	1.31825
Institutional Ownership*Financial Development Dummy	-0.507087	-6.530814
	(-2.03986)**	(-2.656096)***
Board Independence*Financial Development Dummy	-3.55E-05	2.26E-03
	-0.209702	1.910808
Audit Committee independence*Financial Development Dummy	0.000831	0.007944
	(2.444856)**	(3.209304)***
LEVERAGE	-0.044052	-0.257364
	(-2.445727)**	(-3.174631)***
SIZE	-0.015727	-5.07E-02
	(-4.955577)***	(-3.098749)***
MTB	-3.42E-05	-0.000264
	(-2.248231)**	(-2.505338)**
ROA	-0.001353	-0.005831
	(-3.745628)***	(-3.269175)***
Prob(J Statistics	0.55	0.53
m1	-1.513645	0.43998
m2	-0.978298	-1.031306

Notes: This table describes the results from the first difference generalized method of moments regressions for the effect of financial development on the relationship between corporate governance and earnings management in the following order: Model 1 is showing the accrual earning management estimated by Larcker& Richardson (2004), Model 2 is showing real earning management estimated by Roychowdhury (2006). AEM_{ijt-1} and REM_{ijt-1} are the lagged dependent variables. The probability of J statistics is the result of 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 (mj) statistics with (H_0: no autocorrelation). The table shows the m1 and m2 values for the results of the 1st and 2nd order serial correlation, respectively. Each coefficient in model 1 and model 2 represents the Change in earnings management based on a one-unit change in the determinant,t values are in the parenthesis *, **, *** indicates the significance level at 10%, 5%, and 1%, respectively.

The proponents of the monitoring hypothesis have emphasized the role of institutional owners in overseeing the value-destroying activities of the managers. Eventually, their interference in managerial decisions will enhance firm performance by raising the stock price and reducing the earning management practices, particularly manipulations related to real earnings (Velury & Jenksin, 2006). The active monitoring by institutional owners is systematically linked with the magnitude of their investment in the companies. In addition, previous studies have established the argument that the more solvent and indifferent institutional investors are to the pressures of the stock market, the more the budgetary manipulations of real earnings can be impeded and vice versa. Institutional investors that ignore capital market pressures, such as investment advisors, mutual funds, pension funds, etc., can limit real earnings. These investors are not engaged in any business contract with the investee firms, so they can confidently challenge the myopic activities of the firm's management (Sakaki et al., 2017).

Our results in Table iii also reveal that managerial ownership is significantly negatively associated with accrual and real earnings management. These results are consistent with the incentive alignment effect hypothesis. The advocates of the incentive alignment effect hypothesis (Jensen &Meckling, 1976) infer that managerial ownership may serve as a monitoring tool and effectively regulate the myopic managerial behavior associated with income increasing earning management. Several studies, including Ali et al. (2008), Johari (2009), Alves (2012), and O'Callaghan et al. (2018), confirmed the negative association between managerial ownership and earning management practices.

Another strand of literature empirically confirmed that independent boards are more effective in regulating and aligning the managerial decisions in the best interests of the shareholders while controlling the opportunistic earning management of the firms (Alzoubi and Selamat, 2012). Our results are similar to the earlier studies documenting the evidence on the influence of independent board in reducing accrual and real earnings management (Weisbach, 1988, Byrd and Hickman, 1992, Klein, 2002, Marra et al., 2011; Xiong and Ganguli, 2014, Alqatan, 2019, Wasan & Mulchandani, 2020; Ekadjaja, 2020). However, our results are not statistically significant for the relationship between board independence and accrual earning management but significant for the relationship between board independence and real earning management.

Moreover, our results substantiate the significant role of the independent audit committee in reducing the accrual and real earnings management practices of the firms. Many studies contend the substantial role of an independent audit committee in the appropriate implementation of financial

regulations to oversee the misstatement of accounting figures in the company's annual reports (Agarwal & Chadha, 2005; Latif & Abdullah, 2015). Moreover, an independent audit committee can restrain managers from indulging in earning management practices by tightening the internal audit and control mechanism strategies (Gul et al., 2002; Zureigat, 2011; Sun & Lan, 2014; NGO & LE, 2021).

Further, our model includes the financial development dummy[13] to analyze the impact of the country's financial development on the accrual and real earnings management. The coefficients of our financial development dummy variables in table iii are -0.77 and -0.07 for accrual and real earnings management, respectively. Consistent with Enomoto et al. (2018), our results empirically proved that financially developed economies are 77% less involved in accrual earning management than the developing economies. In contrast, financially developed economies are 7% less involved in real earning management than developing economies. In addition, all the control variables, including leverage, size of the firm, MTB, and ROA, significantly negatively affect the level of accrual and real earnings management.

Finally, our model includes four interaction terms MAN_OS*FDI, INS_OS*FDI, BI*FDI, and ACI*FDI, to investigate the moderating role of financial development in the established relationship between corporate governance and earnings management proxies. These results indicate that level of financial development significantly negatively moderates the positive relationship between institutional ownership and accrual earning management and the negative relationship between institutional ownership and real earnings management. Additionally, financial development also significantly negatively moderates the relationship of audit committee independence with accrual and real earnings management. In contrast, the moderation effect of financial development in the relationship between board independence and earning management is insignificant in both accrual and real earnings.

Opportunistic managers manipulate accounting accruals of the firms to serve themselves at the expense of shareholders. They play this hide and seek game through window dressing of the company's financial statements and try to deceive outsiders due to conflict of interest between managers and owners attributed to agency problems (Jensen &Meckling, 1976). Further, it is evident from the earlier studies that increased financial development ensures effective regulatory framework, improved accounting standards, protection of investor rights, tight audit scrutiny and monitoring mechanism, better transparency and disclosure practices, corporate law system, developed financial institutions, and sophisticated market(Beck and Levine, 2002; Fernandez and Tamayo, 2017).

These potential consequences of financial development may reduce information asymmetry and agency cost and hence mitigates the incentives for the managerial and institutional shareholders, and executive members of audit committee expected from the opportunistic earning management (Jo & Kim, 2007; Brown et al., 2014; Abad et al., 2016, Enomoto et al., 2018). In this context, our findings also confirmed that an increase in financial development weakens the negative association of Institutional ownership and audit committee independence with earning management by reducing the incentives to manipulate earnings linked with information asymmetry and agency problems. Further, our results provide credence to the argument that financial development also weakens the positive association between institutional ownership and earnings management practices. We contend that an increased level of financial development in the country improves the corporate disclosure practices and reduces the

[13]1 is assigned to the highly developed countries and 0 otherwise.

chances for the institutional investors to ally with the executive to manage earnings for the expropriation of minority shareholders' interests.

Additionally, it is clear from earlier research that stringent accounting standards, corporate governance laws, and a close monitoring and auditing system restrain managers from accrual-based earnings. Consequently, they tend to be involved in real earning management as it can substitute for accrual earning management (Joosten, 2012). Our results confirmed this substitution as we noticed that in highly developed economies, managers are less inclined towards accrual earning management due to strict accounting regulations and tight monitoring mechanisms and shift their strategies towards real earning management. Though accrual and real earnings management are high in developing economies, this ratio is even higher for accrual earnings management due to their weak regulatory framework, poor accounting standards, and futile governance mechanism.

5. Conclusion

The present study investigated the difference between financially developed and developing economies using accrual and real earnings management practices and the effectiveness of good governance policies in reducing such activities across the developed and developing economies. We estimated the moderation effect of financial development on corporate governance-earning management relationships by applying a generalized method of moments (GMM) using panel data of 600 non-financial firms listed on stock exchanges of developing and developed economies.

Our research findings confirmed the effectiveness of corporate governance attributes such as ownership structure, board independence, and audit committee independence in mitigating accrual and real earnings management activities. While previous research has frequently focused on the effect of corporate governance strategies on accrual earnings management, we have examined both accrual and real earnings management and reported that firms use more of these activities in less developed economies, particularly accrual earning management. However, the intensive use of earnings management activities can be attributed to less financial development, such as poor accounting standards, lack of transparency and disclosure practices, inefficient audit and control strategies, and inefficient capital markets.

Further, this paper contributes to the literature by providing evidence on the moderating effect of financial development in the established relationship between corporate governance and earnings management practices. While incorporating financial development into the corporate governance-earning management relationship, we found that the mitigating effect of governance policies on earnings management is generally weaker in developed economies than in developing economies. The power of institutional investors and independent audit committee members in restraining earning management practices significantly reduces in highly developed economies as financial development leads to less information asymmetry and agency costs which presumably results in reduced managerial incentives to manage earnings.

Finally, our findings also provide some potential implications for policymakers, regulators, and shareholders. Importantly, policymakers of developing economies should strongly emphasize financial development, which improves the general macroeconomic environment of the economy, such as regulatory framework, law and order conditions, political stability, inflation rates. Further**,** the corporate sector should formulate strategies to restrict managers from indulging in earning manipulation activities

that destroy the shareholder's wealth, particularly in the long run. In this regard, regulators of developing economies should prevent accrual earning management activities that negatively influence firm value, shareholders, and the economy as a whole. To realize this objective, firms can emphasize restructuring their ownership structure and appointing independent board and audit committee members to limit the managerial opportunistic earning management behaviors. Additionally, our findings might also be of use to potential investors to analyze their future investment opportunities in developing and developed economies in the presence of earning management activities which may affect subsequent performance and stock returns of firms.

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