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Ownership structure and earnings management in emerging markets—An institutionalized agency perspective

Shuji Rosey Bao[a], Krista B. Lewellyn[b,*]

[a] Elon University,Love School of Business, 314 E. Haggard Avenue, Elon, NC 27244, United States
[b] University of Wyoming, College of Business, 1000 E. University Ave., Laramie, WY 82071, United States

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ABSTRACT

Previous earnings management research has largely focused on firm-level governance mechanisms in single countries or on macro-level variables in multiple countries. Building on this research, we incorporate firm ownership predictors along with national institutional dimensions to explore why firm decision makers in emerging markets vary in their earnings management behavior. Our theoretical framework integrates agency and institutional theories proposing that firm-level ownership mechanisms do not function in isolation, but are reinforced or attenuated by elements of the institutional governance environment. The multilevel empirical analysis of 1200 firms in 24 emerging markets indicates that controlling ownership is positively related to earnings management. We find that the level of minority shareholder protection in a country weakens this positive relationship. We also find that regulatory quality strengthens the negative relationship between institutional ownership and earnings management activity. It is hoped that awareness of how firm ownership structures interact with national-level institutions in affecting firm-level behavior will help managers and investors develop skills and practices to better cope with business norms in emerging economies.

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1. Introduction

> "*We struggle to find companies that satisfy our quality criteria,*" *said Christopher Wong, senior investment manager at Aberdeen Asset Management in Singapore, who runs its emerging markets fund.* "*We are uncomfortable with the opaque business structures and the generally poor corporate governance standards.*" (Saminather, 2015)

In recent years, emerging markets have received much scholarly attention due to their economic growth, restructured markets, and significant involvement in the world economy (Hoskisson, Eden, Lau, & Wright, 2000). Despite these developments, as the opening quote illustrates, the quality and accuracy of financial information reported by many firms in these countries continues to be questioned in practice as well as in scholarly research (e.g., Li, Park, & Bao, 2014; Wang & Yung, 2011). Relatedly, earnings management is a concern for regulatory bodies in emerging markets as well, since it may threaten foreign investments and corporate partnerships in these markets (Chen, Elder, & Hsieh, 2007).

Earnings management is defined as "the practice of distorting the true financial performance of the company" (Klein, 2002, p. 376). It occurs when managers exercise discretion in the ways they structure transactions in financial reports, with the intent to either mislead stakeholders about the true financial performance of the company or to influence transactions that rely on reported accounting values (Healy & Wahlen, 1999). Firms in emerging markets have been found to manage earnings to a much greater degree than those in developed economies (Li, Selover, & Stein, 2011; Li et al., 2014). However, despite extensive empirical research on the antecedents of earnings management in the developed market economies of the U.S. and U.K (e.g., Bedard, Chtourou, & Courteau, 2004; Erickson & Wang, 1999; Klein, 2002; Park & Shin, 2004; Peasnell, Pope, & Young, 2005; Xie, Davidson, & DaDalt, 2003; Teoh, Welch, & Wong, 1998), there is much less understanding and empirical evidence of how and why firms manage earnings in emerging economies (Wang & Yung, 2011).

Variation in earnings management across firms in developed markets is often viewed as a function of firm-level governance quality (e.g. Davidson, Jiraporn, Kim, & Nemec, 2004; Klein, 2002; Peasnell et al., 2005). This research largely underpinned by agency

* Corresponding author.
E-mail addresses: rbao@elon.edu (S.R. Bao), klewelly@uwyo.edu (K.B. Lewellyn)
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theory suggests that because of the separation between managers and shareholders, these actors may have conflicting goals (Ball, 2013). The divergence in goals may manifest as an inclination for managers to use their discretion to make earnings appear near target levels, so as to achieve private control benefits and other self-interested objectives (Jiraporn, Miller, Yoon, & Kim, 2008). Since much of this agency theory-based earnings management research has been conducted in single country settings or within developed markets, less attention has been given to how earnings management activity varies in countries that have dramatically different firm-ownership structures and national institutional environments.

We propose that in emerging markets, where firm-level and country-level factors driving managerial behavior largely depart from the Anglo-American governance system, traditional agency theory (Jensen & Meckling, 1976) will not sufficiently explain the variation in earnings management. Rather, *institutionalized* agency theory (Aguilera & Jackson, 2003; Seal, 2006) provides a more appropriate framework to explore the interplay between firm-level governance mechanisms and national institutional elements on earnings management.

The integration of agency and institutional theories recognizes that the unique institutional environments in which managers and owners/shareholders are embedded shapes the nature of these economic actors as well as how they evaluate information, use their discretion, and justify their behavior (Aguilera & Jackson, 2003; Filatotchev, Jackson, & Nakajima, 2013; Hoenen & Kostova, 2014; Ning, Kuo, Strange & Wang, 2014). In particular, it permits consideration of the distinctive patterns of shareholder concentration that are often observed across emerging market countries as well as the unique identities of ownership types in these countries (Chen & Yu, 2012; Filatotchev et al., 2013).

We hypothesize that in emerging economies, controlling shareholders will be better able to influence the reporting policies of accounting information, in order to fulfill self-interested purposes, resulting in greater earnings management activity. In contrast, we expect institutional ownership will be negatively related to earnings management as these types of shareholders have incentives and capabilities to promote accurate reporting of earnings and discourage financial misreporting (Chung, Firth, & Kim, 2005; Chung & Zhang, 2011). Yet we know from previous theory and empirical evidence that the effectiveness of corporate governance mechanisms is influenced by their level of legitimacy with respect to prevailing institutions within a given society (Aguilera, Filatotchev, Gospel & Jackson, 2008; Filatotchev et al., 2013). Therefore we expect that incentives for a given shareholder to influence earnings management activity will vary with the institutional forces at play in the context within which a firm operates. Specifically, we explore how ownership concentration and the type of owner may affect earnings management activity differently because of variation in institutional characteristics related to minority shareholder protections and regulatory quality across countries.

Consequently, by examining these relationships in a nuanced fashion, we seek to contribute theoretical and empirical insights to the comparative corporate governance literature, and in particular that focused on emerging markets. Although interest in investigating firm behaviors in emerging economies has grown significantly in the past decades, research exploring corporate governance issues of these markets remain limited (Chen, Li, & Shapiro, 2011; Crittenden & Crittenden, 2012). The few comparative international studies on earnings management (e.g. Han, Kang, Salter, & Yoo, 2010; Shen & Chih, 2005) consider the influence of firm-level and country-level governance mechanisms in isolation, not capturing the embedded nature of the situation. Our multilevel analysis with a sample of 1200 firms from 24 emerging economies provides a richer understanding of how the national institutional environment in which firms are embedded in plays a critical role in shaping the relationships between the important firm-level governance mechanisms of ownership by controlling and institutional shareholders with earnings management activity. In doing so we further understanding of why managers are incentivized and/or dissuaded from using their discretion to manage earnings due to constraints from both their firm's internal and external contexts. As such we are able to explicitly address concerns about the "under-contextualized nature of corporate governance research" (Filatotchev et al., 2013, p. 966) and in particular "facilitate an international contextualization for the traditional, context-free agency theory perspective" (Bowe, Filatotchev, & Marshall, 2010, p. 347).

2. Theory and hypotheses development

For firms operating in emerging markets, there is less of a distinct separation between ownership and management than for firms operating in the developed markets of the U.S. and U.K. (Chen & Yu, 2012; Filatotchev et al., 2013). Even firms from emerging markets that are publicly listed generally have a highly concentrated ownership structure with top managers being (or directly representing) controlling shareholders (Ding, Zhang, & Zhang, 2007). This underscores the need to re-consider the traditional theoretical approaches to earnings management research, which has focused on conflicts between principles (owners) and agents (managers) (García-Meca & Sánchez-Ballesta, 2009).

With an institutionalized agency theory perspective, managers are still viewed as agents with authority delegated from the legal owners of the corporations, but their actions are also influenced by values and norms that are considered legitimate within a given institutional environment (Seal, 2006). Institutionalized agency theory connects the routine nature of managerial accounting practices with external institutional influences (Seal, 2006). As such, it is a more appropriate framework for understanding how firm ownership governance mechanisms shape earnings management activity in emerging markets. Additionally, it provides a meaningful way to understand how these relationships may be influenced by elements of the institutional context.

2.1. Firm-level governance mechanism of controlling ownership

In emerging markets the fundamental agency problem for firms is not conflicts of interest between outside investors and managers, but rather conflicts of interest between controlling shareholders and minority shareholders (Chen et al., 2007; Ding et al., 2007; Johnson, La Porta, Lopez-de-Silanes, & Shleifer, 2000). In other words, in emerging markets, the traditional agency problems of prerequisite consumption and entrenchment are less relevant than the agency problems of expropriation (Dharwadkar, George, & Brandes, 2000; Filatotchev et al., 2013). This may in part explain why internal governance mechanisms used to monitor firm managers in developed capital markets, such as independent boards of directors and separated CEO and chair positions, have been less effective at forestalling opportunistic managerial behavior such as earnings management in emerging markets (García-Meca & Sánchez-Ballesta, 2009). It is also why, scholars have argued that boards of directors in emerging economies are not as actively engaged in monitoring corporate executives compared to their counterparts in developed markets, rather, it is the firm owners who largely fulfill the governance role of monitoring (Denis & McConnell, 2003).

Research has shown that high levels of ownership by management insiders in firms operating in developed economies may result in entrenchment (Lim & McCann, 2013; Morck, Scheifer,

& Vishny 1988). Entrenched managers have greater power and discretion whereby they are able to pursue actions for their own personal benefit, which may include misreporting earnings information to a greater extent (Cornett, Marcus, & Tehranian, 2008; O'Connor, Priem, Coombs, & Gilley, 2006). In emerging markets, the entrenchment of controlling shareholders who represent a powerful individual or family is similar to that of the insider manager in the developed markets.

Indeed, it has been proposed that concentrated ownership is the ultimate determinant of companies' poor governance practices in emerging markets (e.g., Claessens, Djankov, & Lang, 2000; Fan & Wong, 2002; Stulz, 1988). The reason for decreased governance quality is that as ownership exceeds a certain point, it becomes increasingly easy for the majority owners to gain control over managers in order to generate private benefits at the expense of minority shareholders (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000; Shleifer & Vishny, 1997; Tang, Liu, & Cheng, 2009). Controlling owners gain private control benefits by appointing affiliated members as managers or directors in the companies that they own (Yoshikawa, Zhu, & Wang, 2014). As representatives of controlling shareholders, these managers and directors are less likely to be questioned or challenged by other directors on key issues. For instance, Jaggi and Leung (2007) argue that outside directors are reluctant to oppose directors or managers affiliated with the controlling shareholders because their own reappointment is at the discretion of the controlling shareholders.

Earnings management becomes a likely consequence of ownership concentration, because a controlling owner through their significant influence over management is likely to have the ability to be involved with the production of the firm's accounting information. Controlling shareholders may have economic incentives to mask true firm performance. For example, in the event that expropriation results in lower actual earnings, they will have incentives to manage earnings upward, to avoid revealing any information about their misbehavior (Ding et al., 2007). Based on the above arguments, we propose the following:

Hypothesis 1. In emerging markets, the level of controlling ownership is positively related to earnings management activity.

2.2. Firm-level governance mechanism of institutional ownership

Agency theory predicts that institutional investors may fulfill the governance functions of monitoring, disciplining, and influencing corporate managers (Ingley & Van Der Walt, 2004). Empirical findings on the relationship between institutional shareholders and earnings management are mixed. Some find no relation between institutional ownership and earnings management (e.g. Sarkar, Sarkar, & Sen, 2008; Siregar & Utama, 2008), although others find that institutional investors mitigate earnings management behavior by serving as effective monitors of such activity (e.g. Jiraporn & Gleason 2007; Rajgopal, Venkatachalam, & Jiambalvo, 2002). In a meta-analysis of ten studies, García-Meca and Sánchez-Ballesta (2009) find the relationship between institutional ownership and earnings management to be non-significant. We propose mixed empirical findings may in part be attributable to the differences in institutional contexts. In particular, we suggest that in emerging economies, there are unique conditions incentivizing institutional owners to seek accurate earnings information.

Information asymmetry between firm insiders and investors is generally high in emerging markets, since archival data may be non-existent and/or inaccurate due to the lack of disclosure requirements (Hoskisson et al., 2000). Yet, compared to other investors, institutional investors often have more extensive resources to gather more reliable information about earnings expectations (Bhattacharya, 2001; Jiambalvo, Rajgopal, & Venkatachalam, 2002). Relatedly, Chung et al. (2005) and Chung and Zhang (2011) suggest that institutional shareholders are more sophisticated investors, and therefore will be better able to accurately analyze firm performance and consequently detect financial misreporting. This not only provides greater firm-specific knowledge, but also enhances these types of owners' capabilities to monitor managers' discretionary management of earnings.

Also, in the context of emerging market firms, institutional shareholders may reduce the influence of controlling shareholders on the firm, and therefore constrain the ability of the entrenched insiders affiliated with controlling owners to expropriate firm funds through earnings management (Sarkar et al., 2008). Specifically, large institutional shareholders will be incentivized to monitor firm management in order to protect their investments, since market exit could pose significant economic and reputational risks (Brav, Jiang, Partnoy, & Thomas, 2008; Ciccotello & Grant, 1999; Hadani, Goranova, & Khan, 2011; Johnson & Greening, 1999). Also, institutional shareholders often have large equity positions with the potential for sizable returns on their investment, which justifies the costs associated with monitoring controlling shareholders and/or their affiliated managers (Gillan & Starks, 2007).

There are several ways institutional owners can monitor managerial behavior in emerging markets. For instance, institutional 'activism' can take the form of 'proxy contests' to bring about changes to firms' governance structures (Smith, 1996). Also, the institutions which the investors represent can place requirements on firms prior to investing, similar to the way that a bank lending money to a firm usually requires an audit before agreeing to the loan (Ingley & Van Der Walt, 2004). Based on the presented arguments, we propose that managerial incentives for manipulating earnings will be mitigated by institutional owners. More formally stated:

Hypothesis 2. In emerging markets, the level of institutional ownership is negatively related to earnings management activity.

2.3. Effects of the institutional context

Researchers have long noted that differences in the institutional environments of countries drive variation in corporate finance and accounting behaviors (e.g. Han et al., 2010; La Porta, Lopez-de-Silanes, & Shleifer 1999; Leuz, Nanda, & Wysocki, 2003). Institutions through their enabling and constraining forces may yield different effects on the various types of owners as well as firm managers depending on the extent to which these economic actors conform to legitimized norms and expectations existing in their environments (Desender, Aguilera, Crespi, & García-Cestona, 2013). Therefore different formal institutions legitimize and empower different types of owners' interests. For these reasons we argue that earnings management activities of firms in emerging markets are not exclusively driven or restricted by firm-level mechanisms of controlling ownership and institutional ownership, but will likely be moderated by two particular institutional governance mechanisms: minority shareholder protections and the regulatory quality within a given national economy.

2.3.1. Minority shareholder protection and controlling ownership

Minority shareholder protections include disclosure requirements designed to reduce information asymmetries between issuing firms and potential investors, approval of certain transactions ex-ante and ex-post, voting protocols, ability to challenge controlling shareholders as well as public enforcement measures such as prison terms and fines for misconduct (Djankov, La Porta,

Lopez-de-Silanes, & Shleifer, 2008). Such protections reduce the possibility of controlling insiders expropriating profits or assets from the firm (La Porta et al., 2000; Shleifer & Vishny, 1997).

Research suggests that strong disclosure requirements and enforcements outlined by minority shareholder protection (Djankov et al., 2008) can protect these investors by giving them the means to discipline insiders (e.g., to replace managers), as well as by enforcing contracts designed to limit insiders' private control benefits (e.g., Claessens, Djankov, Fan, & Lang, 2002; La Porta, Lopez-de-Silanes, Shleifer, & Vishny 1998; Leuz et al., 2003). Such control mechanisms can effectively mitigate controlling owners' ability to hide firms' true financial performance from other investors. As minority shareholders can only take disciplinary actions against controlling shareholders when they detect the private control benefits, controlling shareholders therefore have an incentive to manipulate accounting earnings so as to conceal their diversion activities (Shleifer & Vishny, 1997 Zingales, 1994). This argument suggests that earnings management is a likely outcome of controlling shareholder expropriation in the context of weak minority shareholder protection. Relatedly, Morck, Strangeland, and Yeung (2000) argued that in a country with weak investor protection, it is much easier for insiders to predate company profits without fear of penalties.

Empirical evidence indicates that minority shareholder protection plays an important role in influencing international differences in corporate earnings management (Leuz et al., 2003). Specifically, as the disclosure requirements in private enforcement increase, there is greater transparency in the firms' financial reporting (Djankov et al., 2008), reducing the motivation and ability to manipulate earnings. Also, due to the fines and prison terms that may occur with greater public enforcement (Djankov et al., 2008), management will feel greater pressure to assure the authenticity of financial reporting. Therefore, we propose:

Hypothesis 3. In emerging markets, greater minority shareholder protection weakens the positive relationship between the level of controlling ownership and earnings management activity.

2.3.2. Regulatory quality and institutional ownership

Laws protecting the financial markets and integrity of contracts along with the quality of their enforcement are important formal institutions essential for effective corporate governance (Filatotchev et al., 2013; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1997; La Porta et al., 1998, 2000). We argue that high regulatory quality in the external environment complements, or reinforces the role of institutional shareholders in ensuring accurate reporting of earnings in three key ways.

First, high regulatory quality can increase institutional shareholders' power in challenging management decisions that are intended to benefit controlling shareholders to the exclusion of other stakeholders (La Porta et al., 2000). In a high quality regulatory environment, it will be easier for institutional investors to exert pressure to change the board members if they are not fulfilling their obligations to effectively monitor managers' actions and decisions (La Porta et al., 2000).

Second, a strong regulatory environment can decrease information asymmetry, and in turn reduce the monitoring costs incurred by institutional shareholders. Li, Moshirian, Pham, and Zein (2006) argue that the willingness of institutional shareholders to become or remain shareholders can vary with external conditions that affect the potential monitoring costs. In other words, a favorable monitoring environment resulting from high regulatory quality can enable institutional investors to capture more monitoring gains and encourage them to maintain their stakes. This will lead to increased monitoring efficiency and effectiveness.

Third, research suggests that sometimes institutional investors who have close access to management can be labeled as 'insiders', and in such cases strong regulatory quality may mitigate the collusion between these institutional shareholders and their management counterparts (Koh, 2003). In sum, we argue that a high quality regulatory environment can insure institutional investors' roles to guard against opportunistic earnings management by conferring on them power to discipline managers, incentivizing them through lower monitoring costs, as well as by enforcing contracts designed to limit managers' private control benefits. Therefore, we propose:

Hypothesis 4. In emerging markets, regulatory quality strengthens the negative relationship between institutional ownership and earnings management activity.

Fig. 1 summarizes the hypothesized relationships between the ownership governance mechanisms, institutional elements and earnings management activity in emerging economies.

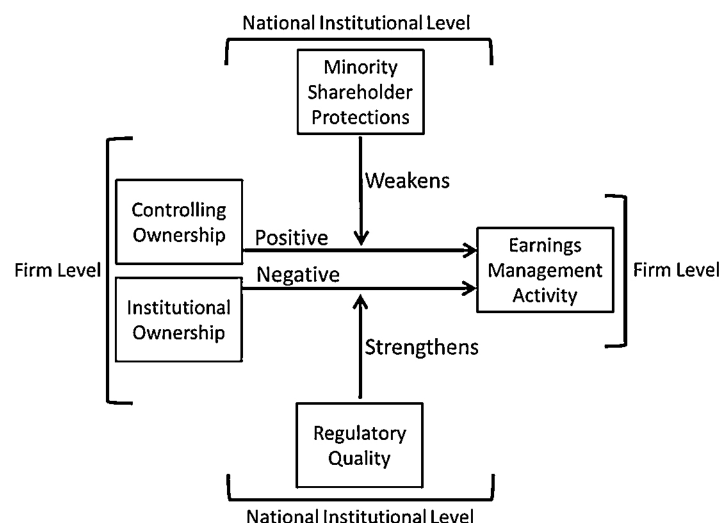

Fig. 1. Conceptual Multi-level Model of Drivers of Earnings Management Activity in Emerging Economies.

3. Methods

3.1. Sample

We base our sample on the top 50 firms (by total assets) operating in each of the 24 emerging markets that are listed by International Monetary Foundation (IMF) in 2012. These firms have all the necessary financial statement data required to measure total and performance-adjusted discretionary accruals and is a sampling process used in previous research (e.g. Semadeni, 2006; Stock, 2004; van Klaveren, Tijdens, & Gregory, 2013). The 24 countries represented in our sample are the following: Argentina, Brazil, Bulgaria, Chile, China, Estonia, Hungary, India, Indonesia, Latvia, Lithuania, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Romania, Russia, South Africa, Thailand, Turkey, Ukraine & Venezuela. Thus the final sample consists of 1200 firms from 24 countries. Following prior research (e.g. Bradbury, Mak, & Tan, 2006; Ding et al., 2007) we use a lagged design, such that the dependent variable of earnings management activity occurs in 2013 and the independent and control variables in 2012. This time period follows the years of the global financial crisis and as noted by the global consulting firm, A.T. Kearney, GDP growth in emerging markets averaged 5.3 percent per year in the period between 2008 and 2013 (Laudicina, Peterson, & Lohmeyer, 2014). The firms in the sample operate in agriculture, mining, construction, manufacturing, transportation, communication, wholesale and retail trade. The number of industries represented in each country ranges from three to seven. Following previous research (e.g. Desender et al., 2013; Han et al., 2010; Leuz et al., 2003), financial industry firms are excluded because their accounting and reporting processes are significantly different from other industries.

3.2. Dependent variable

Earnings management has been measured numerous ways in the literature largely because there are many ways for managers to manipulate earnings (Man & Wong, 2013). Manipulation of operating accruals is likely to be a favored instrument for opportunistic earnings management in emerging economies because they have no direct cash flow consequences and are relatively difficult to detect (Han et al., 2010). Furthermore, as accruals are a visible component of financial statements, there is a direct relationship between accruals and governance characteristics of firms (Bradbury, Mak, & Tan, 2006). Therefore, consistent with earlier studies (e.g. Becker, DeFond, Jiambalvo, & Subramanyam, 1998; Jones, 1991; Klein, 2002) we use the magnitude of discretionary accruals as the proxy for earnings management. Specifically, we apply the same method used by Han et al. (2010) and identify the discretionary portion of accruals for a given firm by estimating the following model using ordinary least squares (OLS) for all firms in our sample at time t, and controlling for performance.

$$TACC_t/TA_{t-1} = a_0{}^*(1/TA_{t-1}) + a_1{}^*(\text{Change in Revenue}_t/TA_{t-1}) + a_2{}^*(GPPE_t/TA_{t-1}) + a_3{}^*(ROA_t/TA_{t-1}) + e_t$$

Where *TACCt* is the total accruals in year t, *Change in Revenue*$_t$ is the change of revenue in year t, and $GPPE_t$ is the level of gross property, plant, and equipment in year t. Each variable in the model is deflated by the lagged book value of total assets (TA_{t-1}) to avoid heteroscedasticity in the error term (Han et al., 2010; Tucker & Zarowin, 2006). Return on assets (ROA) is added as an additional control variable, because previous research finds that the Jones model is mis-specified for well-performing or poorly performing firms (Kothari, Leone, & Wasley, 2005; Tucker & Zarowin, 2006). The residuals e $_t$ from the regressions are used as a proxy for discretionary earnings management. Since our hypotheses focus on the magnitude of accruals rather than on the direction in which the accrual is managed, we use the absolute value of discretionary accruals following prior research (Han et al., 2010).

3.3. Independent and moderating variables

We use the ownership percentage of the largest shareholder as the proxy for *controlling ownership* measured as the number of shares held by the largest shareholder as a percentage of the total number of shares outstanding (Ding et al., 2007). The data is obtained from the Bloomberg Terminal Database (Bloomberg, 2013).

We represent *institutional ownership* as the percentage of a firm's outstanding shares owned by institutional owners (i.e. banks, insurance companies, and mutual funds) as opposed to individual owners. Again, the data is obtained from the Bloomberg Terminal Database (Bloomberg, 2013) and is measured as the number of shares held by institutional shareholder as a percentage of the total number of shares outstanding.

For *minority shareholder protections* within a country we use a measure from Djankov et al. (2008). This measure has been used in recent studies (e.g., Boulton, Smart, & Zutter, 2010; Engelen & van Essen, 2010; Lewellyn & Bao, 2014) and captures the extent to which self-dealing by controlling shareholders is diminished or held to an acceptable level by means of regulating contracting processes (e.g. required disclosure, independent review, ability to litigate, access to evidence) as well as the imposition of fines and prison sentences for self-dealing.

To capture a country's *regulatory quality* we use the value from the World Bank's Development Indicator Database (WDI). According to WDI, regulatory quality refers to the degree that the legal and regulatory framework of a country encourages fairness, objectiveness, and encourages competitiveness of enterprises. This measure is frequently used in cross-national scholarly work investigating country level institutions' effects on economics and firm behavior, and is conceptually consistent with regards to our theoretical framework.

3.4. Control variables

We include several firm-level control variables that have been studied in previous earnings management research. First we include two firm-level variables that are typically used in agency theory-based corporate governance research: *proportion of outside directors* and *CEO duality*. Prior studies have shown boards with more independent directors are associated with increased monitoring of managers which leads to less earnings management activity (Hashim & Devi, 2008; Klein, 2002; Liu & Lu, 2007; Xie et al., 2003). Due to differences across countries in what constitutes 'independence' we categorize any non-employee board member as an outside director, as this is one attribute of independence that is common across jurisdictions (Zattoni & Judge, 2012). The variable is measured as the proportion of outside directors to total directors. CEO duality is also argued to affect the monitoring roles of the board, and thus could influence earnings management (Xie et al., 2003; Davidson, Jiraporn, Kim, & Nemec, 2004). Firms, where the CEO is also the board chair are coded 1 and 0 otherwise.

We also include *board size* as a control variable as relationships between this variable and earnings management have been equivocal with some showing positive effects of size and others showing negative relationships (e.g. Bradbury et al., 2006). Since previous research has shown that firms that are inclined to take greater financial risks often have greater incentives to manage earnings opportunistically (Han et al., 2010), we also control for a firm's *debt–to-equity* ratio. We also included *firm size* as a control, measured as the natural log of total sales. Finally, we included

industry (two-digit SIC codes) dummies in order to control for industry specific effects. The data for the control variables is obtained from the Bloomberg terminal database.

3.5. Modeling & analysis

Since our study involves assessing the impact of both firm and country-level factors on firm-level earning management, we use hierarchical linear modeling (HLM) (Bryk & Raudenbush, 2002). At level 1, the unit of analysis is the firm, and at level 2, the unit of analysis is the country. Given that we are interested in the effects of two firm-level factors and two country- level factors on earnings management, we use the group-mean centering option for our firm-level variables and grand-mean centering option for our country-level variables (Hofmann & Gavin, 1998). Furthermore, since Hypotheses 3 and 4 are for the interaction effects of level 2 variables on level 1 predictors, we use 'slope as outcome' models with random effects to account for both within country and between country variance in our model following prior research (e.g. Hofmann, 1997).

4. Results

Table 1 shows the correlation matrix and descriptive statistics for the variables in this study. The mean for the dependent variable of earnings management (discretionary accruals) is 0.15, with a standard deviation of 0.12, which is comparable to other multiple-country studies (e.g. Han et al., 2010; Xie et al., 2003). Descriptive statistics on the other variables in the model are also provided in Table 1. The percentage of controlling shareholding is 57% on average, whereas the average for institutional shareholding is 12%. The table also shows that minority shareholder protection averages 0.34 on a scale between 0 and 1 for the 24 countries in our sample, while regulatory quality averages to a 0.25. In addition, on average, there are about 44% outside directors on corporate boards for firms in our sample and 16% of the CEOs also serve as the chairman of the board. The maximum correlation is 0.34 between the proportion of outside directors and regulatory quality. To assure that multicollinearity was not problematic, variance inflation factors (VIF) were calculated. VIFs range from 1.11 to 1.50 (average 1.27), well below the suggested value of 4.0 (O'Brien, 2007).

Table 2 shows the results of our hypotheses testing. Model 1 includes only control variables. In model 2 we added the main effects of controlling ownership and institutional ownership as well as the moderating variables. Adding these variables increases the overall model fit compared to the control variable model as indicated by the statistical significance of the change in the Wald chi-square value ($p < 0.01$). In the subsequent models (3 and 4) we added the interaction effects and again the change in the Wald chi-square between the direct effects model 2 and each of the interaction models is significant ($p < 0.01$ for the controlling ownership and minority shareholder protection interaction and $p < 0.05$ for the institutional ownership and regulatory quality interaction).

Hypothesis 1 predicts a positive relationship between controlling ownership and earnings management. As shown, the coefficient for controlling ownership is positive and statistically significant ($b = 0.04$, $p < 0.01$), supporting hypothesis 1. Hypothesis 2 predicts a negative relationship between institutional ownership and earnings management. The regression coefficient for institutional ownership is not significant, and therefore hypothesis 2 is not supported. While we did not formally hypothesize direct effects of minority shareholder protection and regulatory quality, including these variables in model 2 shows the expected negative relationship with earnings management, consistent with our conceptual framework and prior research.

Model 3 tests hypothesis 3, which predicts that minority shareholder protections will weaken the positive relationship between controlling ownership and earnings management. The results provide support for this hypothesis, as the coefficient for the interaction term between controlling ownership and minority shareholder protections is significant and negative ($b = -0.08$, $p < 0.001$).

Hypothesis 4 suggesting regulatory quality will strengthen the negative relationship between institutional ownership and earnings management is also supported. In model 4 the interaction term coefficient between institutional ownership and regulatory quality is statistically significant in the negative direction ($b = -0.03$, $p < 0.001$).

To illustrate the interaction effects we graph the influence of controlling ownership and institutional ownership on earnings management with minority shareholder protection and regulatory quality at low and high levels in Figs. 2 and 3 respectively. In Fig. 2 the slope of controlling ownership on earnings management activity is steeper when minority shareholder protections are low compared to when they are high; indicating that the impact of controlling ownership is greater when protection for minority shareholders is weak.

Fig. 3 shows the relationship between institutional ownership and earnings management activity when a country's regulatory quality is high and low. When the institutional context has high regulatory quality the slope of institutional ownership is steep while it is almost flat when the regulatory quality is low, illustrating that the relationship between institutional ownership and earnings management activity is more negative with high regulatory quality

There are three control variables which are significant in all the models. In line with previous research the debt-to-equity ratio shows a significantly positive relationship with earnings management activity. The governance control variables of *proportion of outside directors* and *CEO duality* exhibit significantly positive and

Table 1
Descriptive Statistics and Correlation Matrix.

		Mean	Std. Dev.	VIFs	1	2	3	4	5	6	7	8	9
1	Earnings management activity	0.15	0.12										
2	Controlling ownership	0.57	0.17	1.14	0.04								
3	Institutional ownership	0.12	0.26	1.21	0.11	−0.27							
4	Minority shareholder protections	0.34	0.44	1.40	−0.08	0.02	0.18						
5	Regulatory quality	0.25	0.57	1.50	−0.12	−0.12	−0.01	0.33					
6	Proportion of outside directors	0.44	0.17	1.27	0.02	−0.15	0.04	−0.05	0.34				
7	CEO duality	0.16	0.37	1.11	−0.04	0.06	−0.01	−0.02	0.10	−0.08			
8	Board size	11.93	4.25	1.38	0.02	0.02	0.06	−0.28	−0.05	0.04	0.19		
9	Debt-to-equity	1.34	1.44	1.14	0.09	−0.14	0.19	0.04	−0.05	−0.03	−0.12	0.23	
10	Firm size	1.8	6.83	1.29	0.07	−0.06	0.06	−0.17	−0.25	0.10	−0.10	−0.27	−0.12

All correlations greater than 0.08 are significant at $p < 0.05$.

Table 2
HLM (Slope as Outcome) Results on Earnings Management Activity.

	Model 1		Model 2		Model 3		Model 4	
	Controls Only		Main Effects		Interaction		Interaction	
	B	S.E.	Controlling & institutional ownership		Minority shareholder protection		Regulatory quality	
			B	S.E.	B	S.E.	B	S.E.
Firm Level								
Proportion of outside directors	0.02**	0.01	0.03**	0.01	0.02**	0.01	0.00**	0.01
CEO duality	−0.02***	0.00	−0.01***	0.00	−0.02***	0.00	−0.04***	0.00
Board size	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Debt-to-equity	0.02**	0.00	0.00**	0.00	0.10**	0.00	0.01**	0.00
Firm size	0.16	0.08	0.15	0.03	0.09	0.03	0.07	0.04
Controlling ownership			0.04**	0.02	0.04**	0.05	0.04**	0.03
Institutional ownership			0.00	0.01	0.01	0.01	0.01	0.02
Industry controls	Yes		Yes		Yes		Yes	
Country Level								
Minority shareholder protection (MSP)			−0.03***	0.01	−0.02***	0.01	−0.03***	0.01
Regulatory quality (RQ)			−0.01**	0.01	−0.01**	0.01	−0.01**	0.01
Cross-Level Interaction								
Controlling ownership * MSP					−0.08***	0.04		
Institutional ownership * RQ							−0.03***	0.01
Wald χ^2	21.54**							
Change in Wald χ^2			15.56**		7.22**		5.26*	

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001.

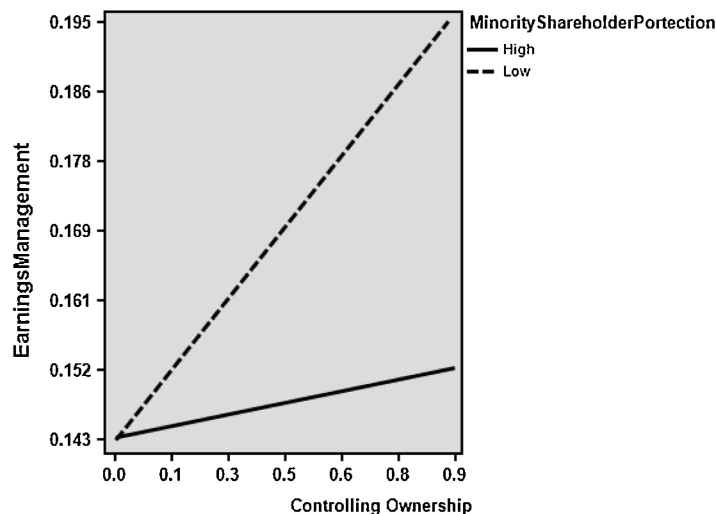

Fig. 2. Interaction Effects of Controlling Ownership and Minority Shareholder Protection on Earnings Management.

negative effects respectively. At first glance these results may seem counterintuitive to agency theory logic. However, previous research in the context of emerging market firms, has reported similar findings (e.g., Bradbury, Mak, & Tan, 2006; Chen et al., 2007; Sarkar, Sarkar, & Sen, 2008). Managers of firms that have boards with high proportions of outside directors may feel they have greater opportunities and capabilities to shield their earnings management activity from observation since these directors typically have less firm-specific knowledge (Hillman, Cannella, & Paetzold, 2000). Also as mentioned previously, the *proportion of outside directors* measure may not adequately capture whether a director is truly independent of both managers and/or controlling shareholders, and thus we acknowledge the results may also be affected by this issue.

With respect to the effect of CEO duality on earnings management, several studies using single country samples in China, India, Malaysia, and Singapore, find as we do, a significant negative relationship between CEO duality and earnings management (e.g., Bradbury et al., 2006; Hashim & Devi, 2008; Liu & Lu, 2007; Sarkar, Sarkar, & Sen, 2008). This may indicate that the additional power a CEO has when also possessing the board chair position, provides a counterbalance to pressure from controlling owners to engage in earnings management activity.

Together these findings further emphasize that agency effects may function differently in the unique institutional contexts that characterize emerging markets.

4.1. Robustness analyses

We perform several additional analyses to examine the robustness of our findings, which we report in Table 3. As an alternative measure for discretionary accruals, we also used total

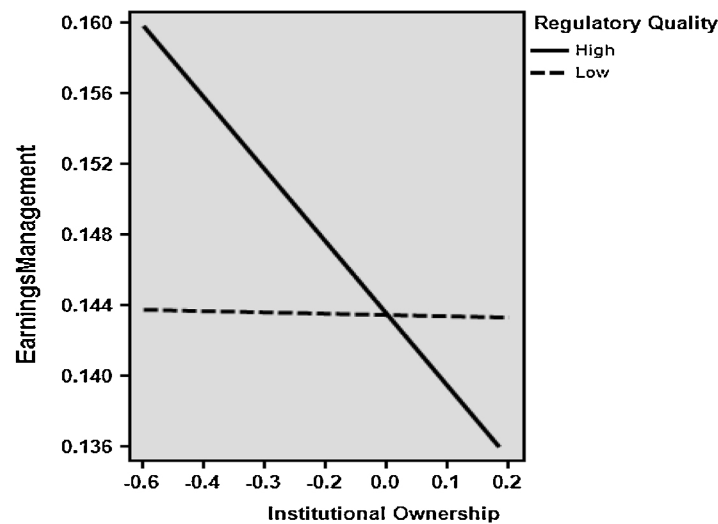

Fig. 3. Interaction Effects of Institutional Ownership and Regulatory Quality on Earnings Management.

Table 3
Robustness Analyses.

			Robustness Analyses					
	Original Model		Total accruals as the dependent variable		Controlling ownership measured as the percentage held by top five owners		Heritage Foundation's (HF) Property Rights Index as an alternate country-level measure	
	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Firm Level								
Proportion of outside directors	0.00**	0.01	0.01**	0.01	0.00**	0.01	0.01**	0.00
CEO duality	−0.04***	0.00	−0.03*	0.00	−0.05**	0.00	−0.01**	0.01
Board size	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Debt-to-equity	0.01**	0.00	0.00**	0.00	0.01**	0.00	0.00**	0.00
Firm size	0.07	0.04	0.09	0.04	0.06	0.02	0.07	0.03
Controlling ownership	0.04**	0.03	0.08***	0.01	0.02**	0.01	0.05**	0.04
Institutional ownership	0.01	0.02	0.00	0.01	0.01	0.02	0.01	0.02
Industry controls	Yes		Yes		Yes		Yes	
Country Level								
Minority shareholder protection (MSP)	−0.03***	0.01	−0.02***	0.01	−0.03***	0.01		
Regulatory quality (RQ)	−0.01**	0.01	−0.01**	0.01	−0.01**	0.01		
HF property rights index							−0.00**	0.00
Cross-Level Interaction								
Controlling ownership interaction	−0.08***	0.04	−0.11***	0.02	−0.09**	0.05	−0.01**	0.00
Institutional ownership interaction	−0.03***	0.01	−0.02**	0.01	−0.03***	0.01	−0.00***	0.00

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001.

accruals as the proxy for earnings management following prior research (e.g., Jaggi & Leung, 2007; Liu & Lu, 2007; Massa, Zhang, & Zhang, 2015). Using this alternative dependent variable did not significantly alter our reported findings; the regression coefficients for our hypothesized direct and moderating effects remain significant and in the predicted directions.

Although much of the extant research has used the ownership of the largest shareholder as a proxy of controlling ownership, some studies have used the ownership percentage of the top five shareholders (García-Meca & Sánchez-Ballesta, 2009). Thus we performed a robustness check using this alternative measure. The results are very similar to our reported findings, as the regression coefficients for controlling ownership is still positive and significant in all models, as are the interaction terms.

As a final check we used The Heritage Foundation's *Property Rights Index* as an alternate country-level measure for the minority shareholders' protection and regulatory quality variables. The *Property Rights Index* "measures the degree to which a country's laws protect private property rights and the degree to which its government enforces those laws. It also assesses the likelihood that private property will be expropriated and analyzes the independence of the judiciary, the existence of corruption within the judiciary, and the ability of individuals and businesses to enforce contracts." (http://www.heritage.org/index/rule-of-law). Since the definition of this measure coincides with aspects of both of our country-level measures (e.g., minority shareholder protection and regulatory quality) we use it in place of each of these measures, but also note that it is much broader than the measures we use in the main analysis. Also, this measure, as opposed to other possible proxies, such as the quality of the national legal environment (Choi & Wong, 2007) or the revised anti-director rights index (Spamann, 2010) was available for all of the countries in our sample. The results

with this alternate measure were largely unchanged from those we report. Taken altogether, these results provide support for the empirical robustness of our results.

5. Discussion

In this study we address the research question of how firm ownership mechanisms directly and in interaction with formal national institutional governance mechanisms influence firms' earnings management practice in emerging markets. Our theoretical arguments are based on an institutionalized agency perspective and our findings contribute to comparative governance research by showing that the relationships between firm ownership and earnings management activity are significantly moderated by important national institutional elements. By doing so, the study underscores the saliency of integrating agency theory and institutional theory to enhance understanding of governance phenomena in emerging markets.

Although a large body of existing corporate governance research on earnings management in developed markets has focused on the influence of board structure and characteristics such as CEO duality and board independence (García-Meca & Sánchez-Ballesta, 2009), due to the unique ownership structures prevalent in emerging markets firms we focus on the role of this internal governance mechanism. Specifically, we theorize and find support that controlling ownership serves as an important determinant of earnings management in our sample of 1200 firms in 24 emerging markets.

In contrast to research that has found empirical support for the monitoring role of institutional shareholders (e.g. Jiraporn & Gleason, 2007; Rajgopal, Venkatachalam,& Jiambalvo, 2002), our non-significant findings of a relationship between institutional ownership and earnings management activity echoes the meta-analysis results of García-Meca and Sánchez-Ballesta (2009). We suggest these mixed findings may be partly due to a failure to account for country-level regulatory environment, since this element of the institutional environment is an important means by which institutional investors are able to exert their monitoring power on firms they are invested in. Indeed, our finding of the significant interaction between institutional ownership and regulatory quality indicates that high external regulatory enforcement is not merely complementary, but necessary to the role institutional investors can play in ensuring accuracy and integrity of firms' reporting of earnings. This finding, along with the significant finding on the interaction between minority shareholder protection and controlling ownership on earnings management validates and extends the institutionalized agency theory perspective. In particular, it highlights that elements of the institutional environment reinforce firm-level governance mechanisms' effects on firm behavior by providing the necessary infrastructure to increase monitoring effectiveness and efficiency.

Our research contributes additional insights to comparative corporate governance literature, in particular that associated with emerging market firms. Our finding of a significant relationship between controlling shareholder and earnings management adds to and reinforces the growing research (e.g.,Chen & Yu, 2012; Gaur & Delios, 2015; Song, Wang, & Cavusgil, 2015) demonstrating that ownership is an important agency predictor in shaping firm behavior in an emerging market setting when considered as part of a multilevel model.

Relatedly, existing research has largely attributed variation in earnings management to either the influence of firm-level corporate governance indicators or national differences such as culture and investor protections (Ball, Kothari, & Robin, 2000; Fan & Wong, 2002; Leuz et al., 2003; Man & Wong, 2013). Our multilevel study that combines both and accounts for the embedded nature of firms in an emerging economy context answers calls from scholars to consider the effects of these important governance mechanisms together (e.g. Aguilera & Jackson, 2003; Aguilera et al., 2008). Overall these findings underscore that similar firm-level governance mechanisms may have dissimilar outcomes in different institutional contexts.

5.1. Practical implications

Our findings also have implications for policy makers, managers, and investors. Policy makers in emerging markets wishing to promote foreign investments in their countries may find it beneficial to work towards strengthening minority shareholder protections, as well as regulatory quality, as our findings suggest they may play important roles in mitigating earnings management activity. This in turn increases the likelihood that their domestic firms will be viewed as credible investment vehicles. For foreign managers looking to partner with firms in emerging markets as well as foreign investors looking to invest in emerging markets, our research may be helpful to their respective decision making processes. For instance, understanding the internal corporate governance of a firm, specifically the ownership structure may improve investors' ability to effectively evaluate the acceptability of investment in the firm. Moreover, awareness of the interaction of firm-specific and national corporate governance in affecting firm behavior will help managers and investors to not only select the best countries for foreign investments, but also develop managerial skills and practices to better cope with business norms and routines in firms operating in emerging countries.

5.2. Limitations and future research

Our findings are subject to several limitations, but which may provide avenues for future research. First, we predicted institutional ownership would mitigate firms' earnings management and failed to find support to this proposition. While we found support for our interaction hypothesis, future research could benefit from separating institutional ownership into domestic institutions and foreign institutions. As prior research (Hu & Cui, 2014) has shown that foreign institutional investors sometimes play a more influential role in governing firms than domestic types in emerging markets, we believe examining these two types of institutional owners' influence on earnings management individually, instead of cumulatively, may provide additional contributions to the earnings management literature. In similar fashion, who the controlling owner is (e.g., family, state, or bank) and how they have control (voting versus cash flow rights) may also influence earnings management activity, in particular they are likely to have different motivations for such behavior. We see this as a particularly interesting avenue for future research.

Second, we examined the role of two national governance mechanisms (regulatory quality and minority shareholder protection) on firm-level earnings management. Although we viewed these dimensions as having particular theoretical relevance with regards to firm-level ownership governance mechanisms and conducted robustness checks with another measure, we acknowledge that other country level governance predictors may also play a role in mitigating earnings management. For instance studying the effects of institutions associated with government efficiency, control of corruption and national culture in concert with other firm-level mechanisms may also provide valuable insights.

Third, our measurement of earnings management activity, while based on previous research, relied on the measure of accruals. We recognize that considering other representations of earnings management such as direct asset misappropriation and

related party transaction may provide additional understanding of how firm-level and national-level corporate governance mechanisms affect incentives and motives to manipulate earnings in emerging markets.

Fourth, our analysis is cross-sectional in nature, and although institutional forces are often relatively stable over time, we recognize there are unique advantages to longitudinal analyses. Future research would benefit from studying how the relationships we hypothesized might differ over time by using a time-series data set.

Finally, all of our variables are measured by archival data, and we believe future research would benefit greatly from mixed-method research designs. Specifically, by combining these sources with primary measures from interviews and surveys to capture managerial perceptions and beliefs about earnings management and the role of institutional forces in emerging markets, several important research questions concerning corporate governance and earnings management could be addressed. For example, what is the process that controlling owners use to influence managers to manipulate earnings and how truly "independent" are board members from controlling shareholders? Through such qualitative data, we expect institutionalized agency theory will be further shown to be an appropriate lens for understanding governance in emerging markets.

6. Conclusion

The present paper's goals were to contribute greater understanding of how important firm- and national-level governance mechanisms work together to influence earnings management activity in emerging market economies and by doing so develop a contextualized approach to governance theory. Although there is a long tradition in international business research to attribute variations in firm-level outcomes around the world to differences in national institutional environments, comparative governance research in the context of emerging markets has been limited. With the increasing importance these economies have in the global economy, this is unfortunate. In this paper, we address this gap and extend the literature by considering firm-level governance effects of ownership structure in combination with factors from the institutional environment in an extensive sample of emerging market firms. Our results demonstrate that the firm-level governance mechanisms of controlling and institutional ownership do not function in isolation, but are reinforced or attenuated by the institutional forces of minority shareholder protections and regulatory quality. We hope that our study incorporating agency and institutional theories to study earnings management activity will prompt further multilevel research into other important managerial phenomena in emerging economies.

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