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Real earnings management and corporate governance: a study of Latin America

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ABSTRACT

This article analyses the impact of ownership structure features and institutional settings on real activities manipulation. The analysis is based on a sample of listed companies in the underexplored Latin American market for the period of 2004–2016. Panel-data-based G.M.M. System Estimation is used in the empirical analysis. The results confirm that the monitoring role of the majority owner is crucial in mitigating managerial opportunistic behaviour. Here, opportunistic behaviour refers to engaging in real activities manipulation that reduces the informative content of financial statements. However, analysis of insider ownership revealed that managers had a negative impact on transparency. We observed that as insider ownership increases, managers engage more actively in real earnings management. We also find that the institutional ownership and the quality of the regulatory system proved to be effective mechanisms in reducing real activities manipulation.

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1. Introduction

This article analyses the effect of the ownership structure features and the institutional characteristics on real activities manipulation, also known as real earnings management. Earnings are the baseline number used by shareholders to decide whether to invest in a firm's stock (Dechow, Ge, & Schrand, 2010; Saona et al., 2017). At the same time, earnings are the criteria by which managers' performance is evaluated and compensation is paid (Shayan-Nia et al., 2017). Hence, managers might very well have the incentives to inflate the reported earnings by using various accounting manoeuvres and techniques to change the timing and structure of operating, investing, and financing activities that would deceive investors regarding the firm's earnings power (Shayan-Nia et al., 2017). This overstatement of financial reports to mislead investors is known as earnings management (Beneish, 1997; Dechow, Sloan, & Sweeney, 1995; Jones, 1991; Zhang et al., 2018).

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The importance of detecting and preventing earnings management has become more critical than ever since the plague of huge accounting scandals that took place in U.S. at the beginning of the 2000s, which had detrimental effects on stakeholders. The 21 largest accounting scandals and the fall of the largest audit firm, Arthur Andersen, from 2000 to 2002 triggered the enactment of Sarbanes-Oxley Act of 2002, which represented an effort by the U.S. authorities to improve the transparency and creditability of financial reporting (Cohen, Dey, & Lys, 2008).

Latin America has been no stranger to accounting scandals caused by the opportunistic manipulation of financial numbers. For example, in 2011 Chile endured the most significant revelation of corporate fraud in the history of its market when on June 9, the retailer La Polar informed the Superintendencia de Valores de Seguros ([S.V.S.], Superintendency of Securities and Insurance) that its financial reports had vastly under-provisioned its consumer credit card portfolio. As a result, La Polar's share price dropped more than 70%, the firm's managers were fired, criminal and civil charges were filed, and the accounting differences have turned out to be even much greater than initially thought. Similarly, discretionary managerial decision-making power to inflate profits was observed in Petrobras in Brazil, where executives overpriced contracts looking for private benefits; or Disco in Argentina, where it was discovered that the financial results of several joint ventures were recorded inappropriately. These are just a few examples of high-profile firms that have misreported their financial statements through active earnings management to the detriment of investors and in direct contradiction with the provisions of governments and regulators. Accordingly, effectiveness of firms' governance in constraining earnings management is determined by the shape of their ownership structures and the characteristics of the institutional setting (Gabrielsen, Gramlich, & Plenborg, 2002). Hence, these arguments justify our research question focused on the assessment of the relative impact of ownership structure features and institutional environment on real activities manipulation.

Earnings management can be classified into two categories: accrual-based earnings management and real activities manipulation (Braam et al., 2015; Ho, Liao, & Taylor, 2015; Zang, 2012). Accrual-based earnings management involves various accounting manoeuvres to improve the earnings baseline, which should be reverted in future periods and should not affect the firm cash flows (Dechow et al., 1995; Healy & Wahlen, 1999). Real activities manipulation, however, involves changes made to the normal business operations and consequently should affect the firm cash flows (Zang, 2012). Real activities manipulation can reduce firm value because actions taken in the current period to increase earnings can have a negative effect on cash flows in future periods (Mellado-Cid, Jory, & Ngo, 2018; Roychowdhury, 2006). Considering its long-lasting impact and the fact that the practice is widely employed by managers of firms from developed countries to improve their reported earning numbers, real activities manipulation deserves more attention from researchers. However, accruals-based earnings management has attracted more attention from researchers so far (Dechow et al., 2011; Walker, 2013).[1]

Real activities manipulation has started to attract the attention of researchers since 2005 with the studies of Graham, Harvey, and Rajgopal (2005), Roychowdhury

(2006), Cohen et al. (2008), Cohen and Zarowin (2010), and Zang (2012). Graham, et al. (2005)'s survey documents that financial executives attach a high importance to meeting earnings targets, and thus are willing to manipulate real activities to meet these targets, even though the manipulation can potentially reduce firm value. Walker (2013) suggests that academic researchers need to take much more seriously the possibility that firms may be regularly making value-destroying real economic choices to meet earnings benchmarks. Despite this, as suggested by Shayan-Nia et al. (2017), there is a clear lack of research in developing countries like Latin America.

Interestingly, Zang (2012) shows that managers choose to engage in real activities manipulation during the fiscal year and adjust accruals at the end of that fiscal year according to how effective real activities manipulation is in moulding the earnings figure. Thus, real activities manipulation should deserve more attention, and as mentioned above, the opportunity and motivation for real activities manipulation is determined by endogenous characteristics of the company and by exogenous factors that emerge from the institutional environment. Consequently, this article intends to shed some additional light on the firm-based and country-based determinants of real activities manipulation for a sample of firms from emerging markets.

Our study basically utilises the ownership structure features as a firm attribute that impacts on real activities manipulation and the contextual characteristics of the legal and institutional environment. Concerning the ownership structure, we study the ownership concentration, the insiders' ownership, and the ownership of institutional investors. Regarding the country variables we used indicators of the countries' government effectiveness, rule of law, and regulatory quality as proxies of the instructional setting quality.

This article contributes to the current literature in different ways. First, contrary to prior literature which focused mainly on accruals-based manipulation as the sole method to mould earnings figures in developed countries, in this study we examine whether corporate governance variables can control real activities manipulation in Latin America as a sample of an unresearched emerging market region. From here comes our second contribution which corresponds to the consideration of a multi-country sample of companies. So far, most of the studies are focused on single-country analyses, which are characterised by their limitation to extrapolate the conclusions and results beyond the local institutional context. For instance, Roychowdhury (2006), Gunny (2010), Zang (2012), Farooqi, Harris, and Ngo (2014), and Mellado-Cid et al. (2018) are either focused on samples of U.S. companies, the Fortune 500 index, or on specific industries. All of them lack broader consideration of contextual variables in their analyses. On the other hand, there are studies focused solely on external country-level determinants of earnings management such as Han, Kang, Salter, and Yoo (2008) which analyses cross-country cultures as a proxy of their value system in explaining earnings management, or Ball, Kothari, and Robin (2000) and Hope (2003) that focus on the legal setting of countries as determinants of earnings management. Similarly, Leuz, Nanda, and Wysocki (2003) show evidence of the impact of legal protection of investors and the quality of financial information reported to outsiders. Consequently, the third contribution takes one step forward in comparison to the current empirical literature on real activities manipulation and follows a more comprehensive and integrated

perspective by analysing firm attributes as well as legal and institutional country-level variables and their effect on real activities manipulation. Hence, this study highlights the importance of diversity of ownership structure features and the characteristics of the institutional settings in monitoring income manipulation among Latin American firms. Fourth, the methodology used in the analysis allows us to efficiently control for several econometric problems observed in the previous empirical literature. Hence, we tackle the endogeneity problem and the individual, time invariant heterogeneity problem by setting an appropriate empirical strategy that reports consistent and robust findings.

The most important results confirm some previous literature in showing that the control-enhancing role of the majority owner is crucial in mitigating the opportunistic behaviour of managers from engaging in real activities manipulation which reduces the informative content of financial statements (see for instance the study of Goh, Lee, & Lee (2013) for Korean firms). The analysis of the insider ownership, however, revealed a negative effect on transparency. We observed that as insider ownership increases, managers engage more actively in real earnings management. Other corporate governance tools, like the institutional ownership and the quality of the regulatory system, demonstrated to be effective mechanisms in reducing real activities manipulation. Taken together, our results mean that the oversight by the majority shareholder in conjunction with the efficiency of the legal and regulatory framework become important governance mechanisms that reduce the managerial discretionary decision-making ability concerning the quality of reported earnings.

The remainder of this study is organised as follows. The following section presents the related literature and hypothesis development. The third section describes the baseline research methodology. After that, results are discussed and finally, in section five, we list the major conclusions.

2. Literature review and hypotheses development

As earnings are the criteria by which managers' performance is evaluated, managers might very well have the incentives to inflate the reported earnings by using various accounting manoeuvres and techniques to change the timing and structure of operating, investing, and financing activities that mislead investors regarding the firm's earnings power. The role of governance structures, among others, is to reduce managerial misconduct that erodes the quality of the reported earnings and increases the opacity of financial reporting. Here we discuss two main corporate governance tools: firms' ownership structure features and the countries' legal and regulatory systems.

2.1. Ownership structure features and real activities manipulation

There are a large number of studies that examine the relation between ownership structure characteristics and earnings management (Alves, 2012; Bekiris & Doukakis, 2011; Fan & Wong, 2002; Kazemian & Sanusi, 2015; Koh, 2003; Leuz, et al., 2003; Masmoudi Ayadi, 2014; Mellado-Cid et al., 2018; Siregar & Utama, 2008; Velury &

Jenkins, 2006). Concerning the ownership concentration and its impact on the management of earnings there are two theoretical hypotheses. The first one, known as the monitoring hypothesis, suggests a negative impact on the manipulation of the financial statements as the controlling owner holds a higher proportion of the outstanding shares (Shayan-Nia et al., 2017). This hypothesis is supported by the supervisory role argument of the majority owner, which minimises the opportunistic behaviour of managers. Through greater and tighter control of majority shareholders, managers have less discretionary power and consequently less incentives to engage in real activities manipulation, suggesting the existence of an alignment of interest between managers and shareholders (Lassoued, Ben Rejeb Attia, & Sassi, 2017). From an empirical viewpoint, Alves (2012) highlighted the importance of ownership structure, mainly managerial ownership and ownership concentration, in constraining the likelihood of earnings management in Portuguese firms.

The competing hypothesis corresponds to a positive relationship between real activities manipulation and the shares held by the controlling owner. This approach is supported by the expropriation of minority shareholders' wealth by the majority owner (Callao, Cimini, & Jarne, 2016). It takes place when the majority shareholder has an excessively high proportion of the outstanding shares that allows him/her to expropriate the wealth of minority investors (Morck, Shleifer, & Vishny, 1988). In this case, majority owner's decisions deprive the rights of minority shareholders because the former is often incontestable in the weak legal systems (Johnson et al., 2000; La Porta, Lopez-De-Silanes, & Shleifer, 1999). In this situation, the majority shareholder may consent to certain accounting practices that discretionarily change the earnings in one or another direction for private benefits, at the expense of minority investors. For the East Asian context, Fan & Wong (2002) found evidence of the expropriation hypothesis where controlling owners are perceived to report accounting information for self-interested purposes.

Regarding these two theoretical hypotheses, we believe that in the context of Latin American countries the monitoring hypothesis is more plausible. Differing from most of the previous literature focused on the U.S. and developed markets, Latin American countries are characterised by the civil-law legal system, in which most of the monitoring is performed through internal governance systems, low levels of investor protection of minority shareholders, and concentrated as well as pyramidal ownership structures (Ataay, 2018; Lefort, 2005; Saona & San Martín, 2016). For instance, according to Lefort (2005), corporate governance in Latin America is characterised by a high level of ownership concentration in which many companies are controlled by one of the industrial or financial conglomerates. In the same line and more recently, Saona, San Martín and Jara (2018) emphasised that the relatively high ownership concentration in emerging Latin American markets, in comparison to other more developed countries, is the natural response to the weaker investor protection of external shareholders. According to Lefort and Walker (2007), this highly concentrated ownership system works as an efficient governance tool against weak protection of investors' rights and feeble law enforcement. Empirical findings for the Latin American region demonstrate that the ownership concentration is an essential driver of firm value supported by the monitoring hypothesis (Saona & San Martín, 2016).

Additionally, for a sample of Chilean firms, for instance, Saona, et al. (2018) found that majority shareholders in business group affiliated firms behave as controllers of managers, mitigating agency conflicts. Hence, given the intrinsic features of the institutional context in Latin America, as stated above, as the ownership concentration increases, the discretionary capacity of managers to overstate the earnings is constrained. Therefore, our first research hypothesis states that:

H1: Based on the monitoring hypothesis, a negative association is expected between the ownership concentration and the extent of real activities manipulation.

The insiders' ownership is another feature that drives real activities manipulation. Similar to before, there are two competing hypotheses (Gugler, Mueller, & Yurtoglu, 2008). On the one hand, when insiders' ownership increases there is less room for managerial misconduct, and consequently real activities manipulation decreases (Yang, Lai, & Leing Tan, 2008). This is known as the alignment of interests hypothesis which suggests that the interests of managers and insiders converge with those of the owners (Bennedsen & Nielsen, 2010). The alternative view is the entrenchment hypothesis which emphasises that managers and other insiders over-exercise their decision-making power since they free themselves from the disciplinary role of several corporate governance systems as suggested by de Miguel, Pindado and de la Torre (2005) and Teshima and Shuto (2008). Hence, entrenched, private rent-seeking managers might be more prone to engage in active real earnings management than managers whose interests are aligned with those of the owners. Regarding the corporate governance characteristics in Latin America, Lefort and Walker (2000), Lefort (2005) and López and Saona (2005) have suggested that the weak institutional framework has moulded the insiders' ownership towards complex structures where managers, family chains, conglomerates, business groups, directors, politicians, and other related parties and stakeholders compound powerful interested and dominant groups that are isolated from direct contestability of second order shareholders, such as minority owners. Therefore, it is more likely that the entrenchment hypothesis crowds out the alignment of interests' hypothesis given the excessive power concentration of insiders. These insiders as dominant groups might be more willing to partake in real activities manipulation for self-interested purposes, private rent seeking, and empire building actions. For instance, according to Masmoudi Ayadi (2014), for French companies as a representative sample of a civil-law country, managerial ownership has a positive impact on the earnings management. In a similar vein, Huang, Wang and Zhou (2013) found that if insider ownership introduces managerial entrenchment, managers with higher ownership would be insulated from shareholder discipline, suggesting more aggressive reported earnings. Consequently, in the context of Latin American corporations it is more plausible to observe entrenched insiders given the high concentration of this kind of ownership. Our second research hypothesis indicates that:

H2: Based on the entrenchment hypothesis, a positive association is expected between the insiders' ownership and the extent of real activities manipulation.

The last corporate ownership feature considered in this study is the role played by institutional investors as a governance device. By their very nature, institutional investors are more skilled and sophisticated in using financial information to make

decisions and in monitoring firms compared to other owners. Literature has widely recognised two types of institutional investors depending on their investment agendas (Brickley, Lease, & Smith, 1988). There are the so called transient institutional investors (Duggal & Millar, 1994; Njah & Jarboui, 2015) that are characterised by holding an investment portfolio with high turnover ratios and consequently with a short-term orientation. Their major goal is to profit out of the market movements with no direct involvement in corporate management decisions in the companies they invest in (Elyasiani, Jia, & Mao, 2010). Transient institutional investors simply adopt an exit policy by selling their stakes when dissatisfied with the firm's management or stock market performance (Tsai & Gu, 2007). This passivity or detachment from the monitoring activity of the companies they invest in is substituted by liquidity and short-term oriented profits (Benkraiem, 2008). The other type of institutional investor is known as dedicated or long-term oriented investors which are characterised by more active monitoring activities (Njah & Jarboui, 2015). Indeed, these investors enjoy the power, resources, and incentives necessary to engage in control-related events such as in the assessment of the quality of financial reporting (Chung, Firth, & Kim, 2002).

In the context of the Latin American corporate sector, it is much more plausible that institutional investors would be dedicated or long-term oriented than transient for several reasons. According to Jara et al. (2019), institutional investors in Latin America have been the more influential and largest minority investors that contributed to the development of the capital markets and the enhancement of corporate governance systems. Similarly, Elyasiani, et al. (2010) emphasised that institutional investors reduce asymmetries of information in the firms in which they participate. Moreover, the voice monitoring of dedicated institutional investors has become less costly over the past few decades in Latin America as a consequence of their capacity for collective actions (Jara, López, & López-de-Foronda, 2012); whilst the exit policy of transient institutional investors has been increasingly costly given the substantial discounts when liquidating their portfolios (Jara et al., 2019). As an example, specifically in the case of Chile, according to Fernández (2014), independent institutional investors played a key role as external monitors by spending resources and time supervising the governance and quality of decisions of companies they invest in. Consequently, given the monitoring role of institutional investors in Latin America, it is plausible that the managerial discretionary capacity to overstate financial reporting may be reduced when the proportion of institutional investors increases.

Empirical studies such as those of James, Shivaram, and Mohan (2002) and Hashim and Devi (2012) for U.S. and Malaysian firms, respectively, have shown that firms with a relatively high level of institutional investors reduce the discretionary capacity of managers and the agency costs and enhance the informativeness of earnings. These authors concluded that the presence of institutional investors not only improves governance practices but also contributes to a better quality of accounting information since it allows mitigation of the earnings management activity. In another context, Koh (2003) found for Australian firms that those with lower institutional ownership levels engage in income-increasing discretionary accruals. This means that firms with higher levels of institutional ownership limit the discretion for earnings management. Therefore, institutional investors can help corporate

governance mechanisms in reducing earnings management when they have a sufficiently high ownership level. Velury and Jenkins (2006) demonstrated a positive relationship between institutional ownership and earnings quality. Similarly, Koh (2007) found that long-term institutional investors constrain accruals management for firms that manage earnings to meet/beat earnings benchmarks. And finally, Masmoudi Ayadi (2014) showed that the ownership concentration and institutional ownership have a positive impact on the earnings informativeness, which results in lower real activities manipulation in the case of French companies. Consequently, we arrive at the following research hypothesis concerning the institutional ownership in the Latin American context:

H3: A negative association is expected between the level of institutional ownership and the extent of real activities manipulation.

2.2. Institutional system and real activities manipulation

There is no doubt that corporate governance is a function of firm attributes, but it also depends on the efficiency of the legal setting in which companies operate (Filatotchev, Jackson, & Nakajima, 2013). For instance, Ball, Robin, and Wu (2003) argued that the institutional arrangements of a country are the most important factor in controlling managers' self-interest, which reduces opportunistic behaviour such as the overstatement of financial reports, and improves the quality of the accounting information. Insiders and majority shareholders take actions depending on their opportunity to gain profits. Hence, low legal protection of minority shareholders can provide these insiders and majority owners with incentives to extract private benefits at the expense of minority shareholders (La Porta et al., 2000).

Concerning the characteristics of the institutional setting, it has been widely argued that it has an impact as a governance system on the discretionary capacity of managers to engage in real activities manipulation. Specifically, improvements in regulation have dramatically changed the managerial behaviour concerning misreporting of financial information (Rachisan, Bota-Avram, & Grosanu, 2017). For instance, Cohen et al. (2008) stated that managers have shifted their method of earnings management from accrual-based earnings managements to real activities manipulation after the passage of the Sarbanes-Oxley Act (S.O.X.) due to the increased scrutiny of accounting practices. Facts such as weak investors' rights protection can provide insiders with incentives to extract private benefits by disguising the actual performance of the company (Felício et al., 2018; La Porta et al., 2000) and by obfuscating firm performance (Dick et al., 2017; Lee, Chen, & Ning, 2017; Leuz et al., 2003). The S.O.X. in the U.S. is a clear example of these regulatory arrangements. Another example of these is the application of international reporting systems (I.F.R.S.). For instance, the transition to I.F.R.S. restricted earnings manipulation in Brazilian firms after its complete implementation (Pelucio-Grecco et al, 2014). In this case, the more effective the regulation, the lower the possibility for the manager to opportunistically manipulate the financial statements during the elaboration process and, as a result, the better the quality of the accounting information that is disclosed.

Therefore, one might expect that better corporate governance rules limit the corporate executives' misconduct in managing earnings. For banks from 48 countries, Shen and Chih (2005) provided evidence suggesting that a firm in a country with good anti-director rights does less earnings-smoothing. In a further development for non-financial firms, Shen and Chih (2007) found that stronger anti-director rights may result in stronger earnings-smoothing in low firm-level governance countries only, and not in high firm-level governance countries. They concluded that stronger enforcement of laws can result in less earnings-smoothing but this effect is stronger in countries with worse corporate governance. Thus, they inferred that the institutional setting asymmetrically affects the earnings manipulation based on the firm-level governance systems. Rachisan et al. (2017), Demirguç-Kunt and Maksimovic (1998) and Demirgüç-Kunt, Laeven, and Levine (2004) asserted that legal enforcement and efficient regulatory systems are associated with lower levels of corruption, which make the financial system perform with much less friction. Consequently, we can derive out of these arguments that the characteristics of the legal system also determine the way the executives use their discretionary capacity to manage the accounting earnings.

H4: A negative association is expected between the efficiency of the regulatory system and the extent of real activities manipulation.

All the previous developed research hypotheses are used to demonstrate that firm-level corporate governance as well as country-level governance systems cannot be dissociated or analysed in isolation from one another. Conversely, we believe that all of them are part of the same puzzle.

3. Methodology

3.1. Econometric technique

We are interested in assessing whether a change in the diverse ownership structure measures used as governance mechanisms at firm-level as well as within country modifications in governance can predict a change in real activities manipulation. We proceed in two steps in the empirical analysis. First, we provide descriptive statistics of the most important variables. Mean difference test is also used to contrast the null hypothesis that the mean values observed for the real activities manipulation variables are statistically different from zero.

Second, we performed a multi-variable, explicative analysis. Given the nature of the data used in the empirical analysis, we have to recognise and deal with two major econometric problems: the unobservable heterogeneity and the endogeneity problems (Arellano, 2002). Constant and unobservable heterogeneity refers to specific characteristics of each firm that remain invariant over time such as the firm's managerial style, attitude toward risk, internal policies, or organisational design, among others (Ali et al., 2018; Benavides-Espinosa & Roig-Dobón, 2011; Palacios-Marqués, Roig-Dobón, & Comeig, 2017; Pardo-del-Val, Martínez-Fuentes, & Roig-Dobón, 2012; Torres & Augusto, 2017). Since these characteristics are unobservable, they become part of the random component in the estimated model. This problem is exacerbated

in our model because the lagged dependent variable is also included as an explanatory variable to assess the persistency of real activities manipulation. This firm-fixed effect is tested and controlled in the econometric technique as described below. The endogeneity problem, however, takes place when changes in earnings management drive corporate governance measures (Gonzalez, Rodriguez, & Sossa, 2017; Leuz, et al., 2003). Consequently, the causality effect is not unidirectional and hence, it is expected that such a simultaneity problem may cause biases in the predictions.

Consequently, in order to tackle these econometric problems, we proceed by estimating the regressions using the two-stage Generalised Method of Moments System Estimator (G.M.M.-S.E.). The G.M.M.-S.E. procedure allows us to address at the same time the heterogeneity problem and the potential endogeneity issues by using as instruments the lagged right-hand-side variables in the model in the same way as applied by Jara et al. (2018). Specifically, we introduce all right-hand side variables lagged from $t-1$ to $t-3$ when estimating the regressions. Additionally, the time-invariant or individual fixed-effect referenced above is tested with the Hausman (1978) post-estimation contrast, which compares fixed with random effects under the null hypothesis that the individual effects are uncorrelated with the other regressors in the model. This contrast suggests that the difference in the estimation of the coefficients under fixed and random effects is systematic, indicating that firm-level fixed effects exist.[2] Since in both problems the independent variables are endogenous and correlated with residuals of the regressions, the O.L.S. estimation is both biased and inconsistent (Brown, Beekes, & Verhoeven, 2011). Consequently, the two-stage G.M.M. System Estimator arises as a superior approach to reduce the bias in the regressors and the inconsistency in the estimations which can induce poor asymptotic precision (Alonso-Borrego & Arellano, 1999). Given that the original Arellano and Bond (1991) estimation system can perform poorly if the autoregressive parameters are too large or if the ratio of the variance of the panel-level effect to the variance of the idiosyncratic error is too large (López & Santana-Martín, 2015), Arellano and Bover (1995) and Blundell and Bond (1998) developed the two-stage G.M.M.-S.E., which is an enhanced technique in comparison with the original Arellano and Bond (1991) technique, because the former expands the instrument lists by including instruments in levels and instruments in differences. Nevertheless, in this paper, as a further robustness test of our findings, the two-stage G.M.M.-S.E. approach is used as a primary method and the original Arellano and Bond (1991) technique is also used as a second order method.[3] The consistency of the estimates in methods depends critically on the absence of second-order serial autocorrelation and on the validity of the instruments. Hence, the AR(2) statistic is used to measure the second-order serial correlation,[4] on the one hand, and the Hansen (1982) contrast of over-identified restrictions is used to check if the instruments are exogenously determined, on the other hand. Additionally, we entered in the tables the Wald test of joint significance for all independent variables and tested the potential multicollinearity problems through the Variance Inflation Factor (V.I.F.).

As further robustness checks of our major findings we used panel data Fixed Effects (F.E.), the Feasible Generalised Least Squared estimations (F.-G.L.S.), and the Panel-Corrected Standard Error (P.C.S.E.) as alternative econometric techniques.

Briefly, the F.E. method allows us to handle the unobservable heterogeneity problem. We use F.-G.L.S. because of minor problems of heteroscedasticity observed in the F.E. estimations. In their well-cited paper, Beck and Katz (1995) demonstrated that Feasible Generalised Least Squared specifications produce coefficient standard errors that are severely underestimated. Furthermore, by using Monte Carlo experiments, they report that the P.C.S.E. estimator produces accurate standard error estimates at little or no loss in efficiency compared to F.-G.L.S. Hence, to minimise the bias in the parameters' estimates because of the chosen methodology, the F.E., F.-G.L.S. and P.C.S.E. are used as robustness tests of our major findings.

Finally, given that we use micropanel data in which the cross-section dimension far exceeds the time-series dimension (i.e., we have many more firms than years), we used a Fisher-type (Choi, 2001) test which has as null hypothesis that all the panels contain a unit root to test the stationarity of the variables in the model. The advantage of this test before other tests for the unit root is that it does not require strongly balanced panel data, as is our case. The Fisher-type test for panel data unit roots follows a meta-analysis perspective. That is, this test conducts unit-root tests for each panel individually, and then combines their p-values to produce an overall test (Saona, 2016). Among other advantages in performing the estimation with panel data, it allows us to take advantage of a higher informative content than cross sectional analysis as a consequence of the simultaneous use of time series and cross-sections; it also allows higher variability, lower collinearity among explicative variables, greater degrees of freedom and higher efficiency as stated by Baltagi (2013).

3.2. Sample and variables measures

Our database combines time series with cross-sectional data, allowing the formation of panel data. The initial sample includes Latin American firms covered in Thomson Reuters E.I.K.O.N. from 2004–2016. This period was chosen for two main reasons. First, the length of the period must be considerable because, given its very nature, the panel data restrictions regarding the number of years cause so many drops in the observations. Consequently, samples lose their explicative power for relatively short periods of time, and therefore, we opted for the longest period of consistent information available in Thomson Reuters E.I.K.O.N. to mitigate the risk of weak explicative power of the estimations. Second, as country variables are used, the idea of considering information for the pre- and post-financial recession period of 2007–8 is appealing given that it enters more heterogeneity in the country-level variables to explain the behaviour of real activities manipulation in the region. It is necessary to exclude financial institutions (S.I.C. 6000–6999) and utilities firms (S.I.C. 4900-4999) from the sample because of their regulated status. The advantage of the Thomson Reuters E.I.K.O.N. is that it has homogenised data and enables comparison and analytical work. The composition of the panel data by country is described in Table 1. To compound an efficient panel data, we included a minimum of five continuous year observations per firm with an average of 8.57. The panel data include 5,405 firm-year observations.

Table 1. Panel composition.

Country	Observations	(%)	Firms	(%)	Av. Obs. per Firm
Argentina	415	7.68	50	7.92	8.30
Brazil	1,674	30.97	206	32.65	8.13
Chile	1,357	25.11	133	21.08	10.20
Colombia	233	4.31	38	6.02	6.13
Mexico	1,043	19.30	103	16.32	10.13
Peru	683	12.64	101	16.01	6.76
Total	5,405		631		8.57

The governance, country-level information was obtained from the updated World Governance Indicator form Kaufmann, Kraay, and Mastruzzi (2011) available at the World Bank web page[5] and from the Index of Economic Freedom published by the Fraser Institute, available also on line.[6] The sample of firms is representative of the Latin American corporate sector because it includes the largest companies per country based on their market capitalisation, representing a significant proportion of the assets of the corporate sector in the region.

3.2.1. Real activities manipulation measures

3.2.1.1. Background on the measures of real activities manipulation. Roychowdhury (2006) constructs three measures of real activities manipulation, including abnormal cash flows from operations, abnormal discretionary expenses, and abnormal production costs. These measures have been widely employed in prior studies (Cohen et al. forthcoming; Cohen, et al., 2008; Cohen & Zarowin, 2010; Farooqi et al., 2014; Gunny, 2010; Kang & Kim, 2012; Kim & Park, 2014; Zang, 2012). Therefore, we will use abnormal cash flows, abnormal discretionary expenses, and abnormal production cost to proxy real activities manipulation. Managers can increase earnings by accelerating the timing of sales through increased price discounts or more lenient credit terms that will temporarily increase sales volumes, but these are likely to disappear once the firm reverts to old prices (Cohen & Zarowin, 2010). They also can increase earnings by overproducing inventory to report lower costs of goods sold. With overproduction, managers can spread fixed overhead costs over a larger number of units, thus decreasing the reported cost of goods sold and increasing reported operating margins (Cohen et al., 2008; Cohen & Zarowin, 2010; Roychowdhury, 2006). At the same time, managers can cut discretionary expenditures to increase the reported earnings. Examples of this practice include research and development (R&D), advertising, and selling, general, and administrative expenditures (SG&A). Consequently, real activities manipulation is reflected in abnormal levels of production costs and discretionary expenses. Additionally, we follow Cohen et al. (forthcoming) and Gunny (2010) and use one alternative measure of real activities manipulation based on the abnormal SG&A expenditures.

3.2.1.2. Estimation of the real activities manipulation measures. Like most accrual-based earnings manipulation measures, to obtain the abnormal real activities manipulation we subtract the expected value of each real activities manipulation measure based on the underlying expectation model from the actual value of the real activities measure (e.g., cash flow from operations, discretionary expenses, production costs,

and SG&A). Abnormal real activities manipulation measures and the expectations models are:

Abnormal cash flow from operations:

$$\frac{CFO_{i,t}}{A_{i,t-1}} = \beta_0 + \beta_1\left(\frac{1}{A_{i,t-1}}\right) + \beta_2\left(\frac{Sales_{i,t}}{A_{i,t-1}}\right) + \beta_3\left(\frac{\Delta Sales_{i,t}}{A_{i,t-1}}\right) + \varepsilon_{i,t} \quad (1)$$

Where *CFO* is the cash flow from operation, *i* is the company and *t* the year; *A* is the total assets; *Sales* is the annual sales, and $\Delta Sales$ is the change in annual sales. The abnormal level of cash flow from operation $(RMCFO)$ is measured as the residuals (ε) from equation (1) (Cohen et al., forthcoming; Roychowdhury, 2006). The higher the residuals, the larger the amount of abnormal cash flow from operation, and the greater the increase in reported earnings through increasing sales.

Abnormal discretionary expenditures:

$$\frac{DISX_{i,t}}{A_{i,t-1}} = \eta_0 + \eta_1\left(\frac{1}{A_{i,t-1}}\right) + \eta_2\left(\frac{Sales_{i,t-1}}{A_{i,t-1}}\right) + e_{i,t} \quad (2)$$

Where *DISX* is the discretionary expenditures defined as the sum of R&D, advertising, and SG&A expenditures. The abnormal level of discretionary expenditures $(RMDISX)$ is measured as the estimated residuals (e) from the equation (2) (Cohen et al., forthcoming; Roychowdhury, 2006). We multiply the residuals by -1 such that the higher the residuals, the larger the amount of discretionary expenditures cut by firms to increase reported earnings.

Abnormal production costs:

$$\frac{PROD_{i,t}}{A_{i,t-1}} = \gamma_0 + \gamma_1\left(\frac{1}{A_{i,t-1}}\right) + \gamma_2\left(\frac{Sales_{i,t}}{A_{i,t-1}}\right) + \gamma_3\left(\frac{\Delta Sales_{i,t}}{A_{i,t-1}}\right) + \gamma_4\left(\frac{\Delta Sales_{i,t-1}}{A_{i,t-1}}\right) + \nu_{i,t} \quad (3)$$

Where *PROD* is the sum of the cost of goods sold of the firm *i* in the year *t* and the change in inventory from year $t-1$ to *t*. The abnormal level of production cost $(RMPROD)$ is measured as the residuals (ν) from equation (3) (Cohen et al., forthcoming; Roychowdhury, 2006). The higher the residuals, the larger the amount of abnormal production costs, and the greater the increase in reported earnings through reducing the cost of goods sold (e.g., stronger indication of real activities manipulation). For all the three previous estimations of real activities manipulation, we follow Zang (2012) and compute the regressions cross-sectionally for each industry-year with robust standard errors. Industry sectors are included to capture the impact of industry-wide economic conditions during the year on the firms' real activities manipulation.

Abnormal selling, general and administrative costs:

$$\frac{SGA_{i,t}}{A_{i,t-1}} = \gamma_0 + \gamma_1\left(\frac{1}{A_{i,t-1}}\right) + \gamma_2 MV_{i,t} + \gamma_3 TQ_{i,t} + \gamma_4\left(\frac{Int_{i,t}}{A_{i,t-1}}\right) + \gamma_5\left(\frac{\Delta Sales_{i,t}}{A_{i,t-1}}\right)DD + \mu_{i,t} \quad (4)$$

Where *SGA* is the selling, general and administrative expense, and *MV* is the natural logarithm of the market value of equity (outstanding shares times stock price), *TQ* is the Tobin's Q computed as the sum of the market value of equity and the book value of debt and preferred stocks and everything divided by total assets, *Int* is the internally generated funds, and *DD* is a dummy variable which takes value 1 when total sales decrease from year $t-1$ to t, and zero otherwise. Similarly to the previous models, the abnormal level of sales, general and administrative expenses $(RMSGA)$ is measured as the residuals (μ) from equation (4) (Cohen et al., forthcoming; Roychowdhury, 2006).

Aggregate abnormal real activities manipulation:

Following Zang (2012), we computed *RM* which is an aggregated measure of real activities manipulation calculated as the sum of the abnormal discretionary expenses $(RMDISX)$, multiplied by -1, and abnormal production costs $(RMPROD)$.

Given that Cohen et al. (forthcoming) suggest that although real earnings management measures are not well specified in each and every setting, the weight of the evidence suggests that, across a wide variety of research settings such as those encountered in accounting, finance, and economics, performance-matched real activities manipulation measures will provide better-specified tests than other real activities manipulation measures. Consequently, for all our previous measures, we calculated their performance-matched adjusted real activities manipulation measures. Hence, given that managers' choice of real activities is a function of their firms' current performance, we develop our further empirical analyses basically focused on these performance-matched measures. Furthermore, in their critical study on accrual measures, Kothari, Leone, and Wasley (2005) find that performance matching leads to better specified measures of discretionary accruals when compared to traditional measures of discretionary accruals based on other classical approaches such as the Jones (1991) or modified-Jones model (Dechow et al., 1995).

We match each firm-year observation with another from the same country, two-digit S.I.C. code, and year with the closest return on assets in the current year (ROA). Hence, we define our performance-matched real earnings management measure for firm i in year t as the real earnings management measures in year t minus the matched firm's real earnings management measure for year t (Kothari et al., 2005). The specifics of our performance-matching approach follows Cohen et al. (forthcoming). For each abnormal real earnings management measure (e.g., see all the details provided above) we calculate a performance-matched version for a given "treatment" firm in a given year in a giving country by matching it to another firm in the same two-digit S.I.C. code whose *ROA* is within ±10%. The performance-

matched real earnings management measure is the difference between the real earnings management measures of the treatment firm and that of its match.

3.2.1.3. Estimation of corporate governance measures. We use firm-level and country level-variables of corporate governance as determinants of real activities manipulation. According to our theoretical framework, at firm-level, we use diverse ownership structure measures and other measures that consider the efficiency of the cross-country legal and institutional systems.

3.2.1.3.1. Ownership structure. Three measures are used that consider the ownership structure features per firm: ownership concentration (OC), inside ownership (IO) and institutional ownership (IIO). Following Castro Martins, Schiehll, and Soares Terra (2017) and Lefort and Urzúa (2008), among many others, OC variable is computed as the proportion of shares directly or indirectly owned by the majority shareholder. In order to generate the inside ownership (IO) metric, we followed Saona and San Martín (2018), Saona, et al. (2018), Saona and Muro (2018) and Vallelado, Saona, and San Martín (2017).[7] Hence, IO variable is the proportion of shares $\geq 1\%$ owned by directors, managers, cross-holdings and related stakeholders with significant decision-making power, which corresponds to the ownership that is closely held. The purpose of this variable is to measure the proportion of shares held by owners, who are directly related with the company or perform management or supervisory roles. These stocks are assumed not to be publicly traded in the same manner as common shares. Thus, closely held shares involve shareholders that do not necessarily have executive (e.g., managers) or control-enhancing (e.g., member of the board of directors) duties inside the firm, but also have a certain level of direct or indirect decision-making power, such as the case of holding companies. As emphasised by Saona et al. (2018), closely held companies tend to be resistant to hostile takeovers given that most of the shares are held by a small, interested group of shareholders. Therefore, the use of the closely held variable (IO) assumes convergence of the interests among the closely held owners. IIO, G, and II are dummy variables that produces 1 if the majority shareholder is an institutional investor, the government, or and individual investor, or zero otherwise.

3.2.1.3.2. Country-level variables. For the contextual or country-level variables, we use three different measures. We used two out of six indicators of the composite Worldwide Governance Index[8] computed by Kaufmann et al. (2011). We chose only two of these indicators because they are more closely related to the goal of this study. These indicators are Government Effectiveness (GE) which corresponds to the quality of public and civil services, and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies; and the Rule of Law (RL) which reflects the confidence that the agents will abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. By construction, these individual indicators range between -2.5 and 2.5 with increasing values as the governance indicator improves. The third country-level independent variable was obtained from the Economic Freedom Index[9] corresponding to the Regulation (R), which is an

indicator that goes from 0 to 10 with increasing values as the regulation improves over time in the respective country.

3.2.1.3.3. Control variables. To avoid misspecification problems in the models' estimation, we include control variables which represent a firm's characteristics that might condition the use of real activities manipulation (Jiraporn, Kim, & Mathur, 2008). These variables are the company size (S) measured as the natural logarithm of firm's total assets; the leverage (D) which is the ratio of total liabilies to total assets; the market to book ratio (MTB) corresponding to the market perception of firm's performance, calculated as the natural logathmic transformation of market-to-book ratio; and the firm's profitability (ROA) calculated as the net income over total assets.

Consequently, the general final model to be estimated takes the following dynamic, autoregressive form:

$$RAM_{i,t,c} = \beta_0 + RAM_{i,t-1,c} + \sum\nolimits_{i=1}^{I} \theta_I FLCG_{i,t,c} + \sum\nolimits_{j=1}^{J} \gamma_j CLCG_{i,t,c} + \sum\nolimits_{k=1}^{K} \delta_k CV_{i,t,c} + \eta_i + \mu_t + \epsilon_{i,t} \quad (5)$$

Where *RAM* represents our alternative measures of real activities manipulation for the firm i, in time t and in the country c, *FLCG* is a vector of $I = 3$ firm-level corporate governance measures (e.g., *OC*, *IO*, and *IIO*); *CLCG* is the vector of $J = 3$ country-level corporate governance variables (e.g., *GE*, *RL*, and *R*); and finally, *CV* is the vector comprising the control variables (e.g., *S*, *D*, *MTB*, and *ROA*) and the temporal and country dummy variables to control for the year-country fixed effects that might arise as a consequence of macroeconomic shocks, for instance. η is the individual, firm-specific time invariant effect, μ is the time effect, and ϵ is the stochastic error term. Given that the recognised misspecification of the real activities management measures is closely related to firm performance (Kloepfer & Castrogiovanni, 2018), we followed Cohen et al. (forthcoming) and Kothari et al. (2005) and account for the effect of performance by using the performance-matched real earnings manipulation measures. As mentioned by Cohen et al. (forthcoming), many accounting research settings use performance-matched real earnings management measures which provide a more reliable basis from which to draw inferences about real earnings management-related hypotheses. Therefore, our empirical analysis is focused on the performance-matched real activities manipulation measures as dependent variables – e.g., *PRMCFO*, *PRMDISX*, *PRMPROD*, *PRMSGA*, and *PRM*. Finally, the standard errors in all the estimations are corrected for a firm-clustering effect following Rogers (1993). The firm-clustering corrected standard errors allow for intra-group correlation by relaxing the usual requirement that the observations must be independent. Thus, the observations are independent across firms but not necessarily within firms. This correction is applied to mitigate the risk of obtaining over-significant coefficients which causes the type I statistic error of rejecting the null hypothesis, when in fact, it should be accepted.

Additionally, given that the manipulation of the statements in the contemporaneous period is a consequence of the extent to which managers engaged in such manipulation in the previous periods (Zang, 2012), we enter into the model the respective real activities manipulation metric with one period lagged (RAM_{1-t}). In fact, Roychowdhury (2006) suggests that since real activities manipulation alter the

cash flow streams in the current period and consequently the firm value, managers might see themselves compelled to manipulate cash flows in the future periods to demonstrate long-lasting firm value creation. Furthermore, Walker (2013) highlights the persistence properties of this type of managerial opportunistic misconduct.

4. Results

4.1. Descriptive statistics

Tables 1 and 2 provide information concerning the panel composition per country and descriptive statistics of the variables used in the analysis, respectively. Table 3 is relevant because it allows to test if the mean values of the alternative measures of real activities manipulation used in this study differ from zero. The p-values are reported in the last column, and through these we strongly reject the null hypothesis that mean values are equal to zero, meaning that the Latin American companies included in our sample overstate their financial statements through real activities manipulation, on average. This finding is like those reported recently by Saona, et al. (2017) concerning accrual-based earnings management measures in Latin American firms.

Table 2. Descriptive statistics.

Acronym	Variable	Mean	Std. Dev.	Min	Max
RMCFO	RAM from Operating Cash Flows	0.0000	0.1281	−0.8102	0.5855
RMDISX	RAM from Discretionary Expenditures	0.0000	0.1420	−0.5557	1.0427
RMPROD	RAM from Production Costs	0.0000	0.1899	−2.7265	1.6786
RMSGA	RAM from Sales, Operating and Adm. Costs	0.0000	0.1582	−0.3522	1.0766
RM	RAM Aggregated	0.0150	0.0634	−0.6626	1.9171
ARMCFO	Absolute Value RAM from Operating Cash Flows	0.0835	0.0971	0.0000	0.8102
ARMDISX	Absolute Value RAM from Discretionary Expenditures	0.0909	0.1090	0.0000	1.0427
ARMPROD	Absolute Value RAM from Production Costs	0.1208	0.1464	0.0000	2.7265
ARMSGA	Absolute Value RAM from Sales, Operating and Adm. Costs	0.1099	0.1138	0.0000	1.0766
ARM	Absolute Value RAM Aggregated	0.0190	0.0623	0.0000	1.9171
OC	Ownership shareholder 1	0.3481	0.2796	0.0000	1.0000
LOC	Log transformation of Own	−1.2058	2.4692	−10.9251	9.2203
IO	Closely held shares	0.5191	0.3448	0.0001	1.0000
IIO	Institutional Investor	0.3954	0.4890	0.0000	1.0000
G	Government	0.0041	0.0640	0.0000	1.0000
II	Individual Investor	0.0738	0.2615	0.0000	1.0000
I	Insider	0.2233	0.4165	0.0000	1.0000
GE	Government Effectiveness	0.1640	0.5714	−1.2290	1.2612
RL	Rule of Law	−0.1204	0.7553	−1.8895	1.4267
R	Regulation	6.3169	0.9960	3.6014	8.0333
S	Firm Size	12.3603	2.1692	−0.8488	19.6047
D	Leverage	0.4869	0.2242	0.0000	1.0000
ROA	Return on Assets	0.0350	0.1033	−0.6074	0.4608
MTB	Ln of MTB	0.1042	1.4374	−5.9642	10.4261

Table 3. Mean difference test.

Variable	Obs	Mean	Std. Err.	Std. Dev.	P-Value
ARMCFO	7,183	0.0835	0.0011	0.0971	0.0000
ARMDISX	7,838	0.0909	0.0012	0.1090	0.0000
ARMPROD	7,089	0.1208	0.0017	0.1464	0.0000
ARMSGA	6,438	0.1099	0.0014	0.1138	0.0000
ARM	7,056	0.0190	0.0007	0.0623	0.0000

Recall that we are interested in the extent of the financial reporting manipulation, not in the direction. Therefore, the absolute values of real activities manipulation variables were used to run Table 3 and the following.

4.2. Multivariate analyses

We estimate multivariate regressions in which we control for firm characteristics that might affect the use of real activities manipulation. Table 4 displays the most important findings concerning the impact of the ownership concentration and the contextual variables on the alternative measures used for real activities manipulation – *PRMCFO*, *PRMDISX*, *PRMPROD*, *PRMSGA*, and *PRM*.

Table 4 reports the results by using a dynamic panel-data model where the unobserved panel-level effects are correlated with the lags of the dependent variable. This dynamic-autoregressive model allows us to account for the persistence of the real earnings manipulation over time.

On the one hand, we observe that there is a substantial persistency in the earnings manipulation given that the one-period lagged dependent variables are highly statistically significant in all the fifteen reported models. On the other hand, the magnitude of the coefficients is also economically significant (e.g., greater than 0.10 in all the cases). According to the behavioural finance approach, when conduct leads to positive private benefits in one period, it is hard to change such conduct when future private benefits will be harvested. Consequently, it is difficult for managers to get out of the loop, suggesting a certain level of persistence in real activities manipulation over time.

Since the distribution of the ownership concentration (OC) data is very skewed, we used the logarithmic transformation of this variable suggested by Demsetz and Villalonga (2001) to obtain a symmetric distribution of this measure of ownership concentration as $LOC = log\left[OC/(1-OC)\right]$.[10]

As observed in the results, there is a negative and statistically significant relationship between the ownership concentration (LOC) and three alternative measures of real activities manipulation (e.g., *PRMDISX*, *PRMPROD* and *PRM*). The voting rights of the controlling shareholder are a critical governance system in monitoring managerial activity in Latin American companies. The results provide evidence that agency costs are reduced, and active manipulation of earnings is prevented by aligning the interests between the manager and the majority shareholder. Concerning the ownership structure, the literature has provided two alternative hypotheses. The first one involves the increasing pressure on managers to manage earnings to meet market expectations. The alternative hypothesis supports the benefits of ownership concentration in constraining earnings manipulation because of monitoring and the overall maximisation of shareholders' wealth. This scenario is characterised by financial statements with high earnings informativeness. This harmonisation of interests between managers and majority shareholders is known as the monitoring hypothesis, that induces managers to manipulate earnings less. Our findings support this second hypothesis.

Table 4. Real activities manipulation (G.M.M.-S.E.). Dependent variable performance-matched RAM.

	PRMCFO			PRMDISX			PRMPROD			PRMSGA			PRM		
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Dep. Var_{-t-1}	0.1776***	0.1567***	0.1714***	0.1094***	0.1048***	0.1083***	0.1679***	0.1521***	0.1649***	0.1454***	0.1400***	0.1406***	0.1525***	0.1489***	0.1518***
	(11.4640)	(9.9464)	(11.0875)	(9.3428)	(9.3474)	(9.4255)	(13.5750)	(12.1041)	(13.4582)	(12.4550)	(11.5714)	(11.7268)	(61.3246)	(60.1862)	(60.1307)
LOC	−0.0013	−0.0013	−0.0016	−0.0008**	−0.0007*	−0.0008**	−0.0015*	−0.0015**	−0.0013	−0.0008	−0.0009	−0.0011	−0.0003**	−0.0003**	−0.0004**
	(−1.2591)	(−1.2975)	(−1.5700)	(1.1068)	(1.0102)	(1.0996)	(−2.1203)	(−2.1649)	(−0.9497)	(−1.1157)	(−1.2057)	(−1.5121)	(−1.4987)	(−1.3571)	(−1.4410)
IIO	0.0021	−0.0010	0.0020	−0.0042*	−0.0038*	−0.0029*	−0.0028*	−0.0041**	−0.0045**	−0.0054**	−0.0058**	−0.0039	−0.0041***	−0.0035***	−0.0043***
	(0.4183)	(−0.1956)	(0.4075)	(−0.8624)	(−3.7774)	(−3.5960)	(−0.4033)	(−1.5963)	(−2.6339)	(−2.3035)	(−2.3914)	(−0.9369)	(−3.4720)	(−2.8251)	(−3.5796)
G	0.0424*	0.0312*	0.0356**	0.0171	0.0127	0.0180	−0.7150***	−0.7067***	−0.6991***	−0.1668**	−0.1810***	−0.1679**	−0.0296***	−0.0287***	−0.0259***
	(1.8983)	(1.8018)	(2.1321)	(0.8038)	(0.5513)	(0.7061)	(−60.6968)	(−60.7304)	(−55.8244)	(−2.3760)	(−2.5869)	(−2.4856)	(−8.8324)	(−6.6818)	(−7.3595)
II	−0.0248***	−0.0251***	−0.0250***	0.0001	−0.0007	−0.0004	−0.0152	−0.0154	−0.0173*	0.0060	0.0054	0.0078	−0.0047***	−0.0046***	−0.0046***
	(−2.8460)	(−2.8831)	(−2.8722)	(0.0124)	(−0.1051)	(−0.0568)	(−1.5063)	(−1.5580)	(−1.6997)	(1.0517)	(0.9773)	(1.3867)	(−3.5906)	(−3.3840)	(−3.4116)
S	0.0038	0.0074**	0.0044	0.0034	0.0076**	0.0026	0.0152***	0.0198***	0.0123**	0.0070**	0.0108***	0.0094***	0.0008	0.0030***	0.0007
	(1.0496)	(2.1264)	(1.1917)	(1.0860)	(2.2329)	(0.7649)	(3.4340)	(3.7889)	(2.4951)	(2.4775)	(3.6786)	(3.1407)	(1.0487)	(3.2111)	(0.8039)
D	−0.0019	−0.0002	−0.0047	0.0373**	0.0393**	0.0365**	0.0150***	0.0036***	0.0022**	0.0264*	0.0249	0.0224	−0.0020	−0.0091	−0.0037
	(−0.0791)	(−0.0085)	(−0.1976)	(−2.3756)	(−2.4799)	(−2.3281)	(−3.5076)	(−3.1199)	(−3.0743)	(1.7539)	(1.6343)	(1.4929)	(−0.3625)	(−1.5451)	(−0.6834)
MTB	0.0034	0.0047**	0.0045*	0.0054***	0.0055***	0.0050***	0.0127***	0.0129***	0.0132***	0.0057***	0.0060***	0.0058***	0.0027***	0.0034***	0.0029***
	(1.4622)	(2.0544)	(1.9147)	(3.5213)	(3.6335)	(3.1655)	(4.6701)	(4.8676)	(4.9047)	(3.1547)	(3.3052)	(3.0990)	(5.4432)	(6.9395)	(5.6781)
ROA	0.1070***	0.1010***	0.1055***	−0.0156	−0.0198	−0.0177	0.1133***	0.1160***	0.1201***	0.0676***	0.0630***	0.0639***	0.0119**	0.0092*	0.0097*
	(4.3769)	(4.2482)	(4.3491)	(−0.9519)	(−1.1882)	(−1.0688)	(3.8822)	(3.9579)	(4.0729)	(3.9852)	(3.6728)	(3.7976)	(2.3201)	(1.7420)	(1.9130)
GE	−0.0331**			−0.0182*			−0.0773***			0.0051			−0.0136***		
	(−2.3703)			(−1.6892)			(−3.9947)			(0.5431)			(−5.2354)		
RL		−0.0786***			−0.0454***			−0.0743***			−0.0282***			−0.0298***	
		(−6.2359)			(−4.9754)			(−5.3385)			(−2.9014)			(−10.5679)	
R			−0.0122**			−0.0075*			−0.0138*			−0.0116***			−0.0036***
			(−2.1261)			(−1.7492)			(−1.9286)			(−2.7870)			(−3.1574)
Constant	0.0110	−0.0401	0.0734	0.0384	−0.0177	0.0902**	−0.0999*	−0.1830***	0.0014	−0.0481	−0.0924***	−0.0009	0.0088	−0.0174	0.0312***
	(0.2512)	(−0.9416)	(1.5711)	(0.9938)	(−0.4142)	(2.3719)	(−1.8679)	(−2.8421)	(0.0251)	(−1.3848)	(−2.5873)	(−0.0252)	(0.9025)	(−1.5251)	(3.1091)
Observations	3,787	3,787	3,787	3,975	3,975	3,975	3,577	3,577	3,577	3,769	3,769	3,769	3,555	3,555	3,555
Number of iden	574	574	574	576	576	576	523	523	523	559	559	559	523	523	523
AR(2)	−2.274	−1.849	−2.245	−2.109	−2.110	−2.188	−1.715	−1.781	−1.823	−1.631	−1.483	−1.844	−1.287	−1.296	−1.291
Wald-test	436.3***	436.6***	422.9***	1,093.0***	1,050.0***	984.1***	1,333.0***	1,339.0***	1,218.7***	1,794.2***	1,678.9***	1,803.8***	5,374.2***	5,589.8***	5,448.5***
VIF	2.85	2.40	3.84	5.44	2.45	2.38	5.381	5.98	3.49	4.93	4.17	3.03	3.40	4.10	4.06

Differing from developed-market economies, Latin American countries are still in a developing stage, which is indicated by weak protection of the investors' rights, low degree of enforcement of law, and low degree of information sharing. These facts have redounded in an internalisation of these weaknesses of the legal and institutional environment. The law and finance approach argues that companies have handled such weaknesses in the legal and institutional systems through highly concentrated ownership structures where majority shareholders play a critical role in the firm's decision-making process and in its control. Therefore, from a contextual perspective, our findings also make sense supporting the fact that majority shareholders prevent managers from misreporting the financial information. Specifically, Table 4 provides evidence that majority shareholders constrain the temporary increases in discretionary expenditures (*PRMDISX*) and overproduction (*PRMPROD*) to report lower costs of goods sold. These findings allow acceptance of our research hypothesis H1 which suggested a negative association between the ownership concentration and the extent of real activities manipulation in Latin American firms because of the monitoring effect.

At country-level variables, our findings support the fact that improvements in the government effectiveness (*GE*) indicator reduce the opportunistic behaviour of real activities manipulation. The *GE* variable measures the quality of public and civil services, and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies (Kaufmann et al., 2011). In fact, the results show that the management of operating cash flows (*PRMCFO*), discretionary expenditures (*PRMDISX*), and production costs (*PRMPROD*) are reduced as the government effectiveness is enhanced at the country level as observed in the models (1), (4), (7), and (13) in Table 4. Similar findings are observed when the rule of law (*RL*) index or the regulation (*R*) index are used as contextual variables. In both cases, the findings indicate that as the confidence in the agents and in the rules increases, and the property rights and contract enforcement are properly protected (*RL*), real activities manipulation is constrained. Likewise, when the regulatory and infrastructure environments work efficiently in the corporate sector (*R*), real activities manipulation of the financial statements is restricted as well. These findings are statistically significant at the standard confidence levels for the variables that measure real activities manipulation of operating cash flows (*PRMCFO*), discretionary expenditures (*PRMDISX*), the manipulation of production costs (*PRMPROD*), sales, general, and administrative expenses (*PRMSGA*), and for the aggregated measure of the abnormal discretionary expenses and the abnormal production costs (*PRM*).

Regarding the institutional ownership, the results show that the nature of the majority shareholder, in addition to its voting rights, are also relevant in preventing the deliberate manipulation of real earnings. In fact, when the majority shareholder is either an institutional investor (*IIO*) or the government (*G*), real activities manipulation declines. Hence, the statistically significant coefficients observed in the *IIO* variable allow us to accept our third hypothesis on the ownership structure features. Therefore, if the majority shareholder is an institutional investor, its financial sophistication and greater controlling- and analytical-capacity prevent managers from engaging actively in real activities manipulation.

Concerning other firm-level variables, we observe that particularly the logarithmic transformation of the market-to-book ratio (MTB) is positive and highly statistically significant in all the estimations reported in Table 4. This finding shows that when the market perception of the firm's prospects is overvalued, managers take actions in order to achieve such expectations by reducing the transparency of the financial statements and engaging in real activities manipulation. This fact minimises the informative content of the future earnings, misleading investors to make less informed investing decisions. As stated by Saona et al. (2017), in the institutional environments of high information asymmetry, such as the Latin American one, investors are not able to effectively discern the quality of the information they are provided with and can therefore be misled in their investment decisions by managerial opportunism. According to the behavioural finance approach, the perception of market participants is likely to be biased because of the lack of transparency in pricing and poor quality of financial reporting, which encourage managers to overstate financial information for higher market valuation.

Leverage position also plays a remarkable role in determining the extent of the manipulation of the financial reports. When companies incur greater levels of debt (D), real activities manipulation in terms of discretionary expenditures ($PRMDISX$) and in terms of the production costs ($PRMPROD$) are more actively exercised – we also find some minor evidence that real activities manipulation associated with sales, as well as general and administrative expenses, increases when the debt position increases as shown in model (10). External debt is characterised by debt covenants that firms must fulfil to grant further borrowing. Such contractual restrictions are typically restrictive in institutional environments characterised by weak protection of investors' rights (Berlin & Loeys, 1988; Rajan & Winton, 1995). These findings show that companies engage in more real activities manipulation when debt increases, which means that companies overstate the financial statement to fulfil the contractual covenants. Contrary to what is expected, the control-enhancing role of debt, and particularly the covenants, are not necessarily efficient in the case of Latin American companies. In fact, rather than minimising real activities manipulation, debt triggers more manipulation.

Likewise, firms' profitability (ROA) also triggers real activities manipulation. Managers see themselves encouraged to manipulate the statements when the return on assets improves. A plausible explanation is that they see themselves propelled to more real activities manipulation as profitability increases because potential investors set their goals based on the historical performance of the firm. Consequently, when profitability increases, managers must demonstrate their ability to at least meet historical performance. Real activities manipulation is instrumentalised to achieve this expected performance measured through the return on assets.

Table 5 is designed to test the hypothesis concerning the impact of the insiders' ownership (IO) on real activities manipulation. The insiders' ownership corresponds to the ownership closely held – or not typically publicly held – which includes the ownership of holding companies, employees and insiders such as managers, directors, and officers. As displayed in Table 5, there is evidence that the insider ownership positively affects all the real activities manipulation variables except $PRMSGA$ where it is not statistically significant.

Table 5. Real activities manipulation (G.M.M.-S.E.). Dependent variable performance-matched R.A.M.

	PRMCFO			PRMDISX			PRMPROD			PRMSGA			PRM		
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Dep. Var_{t-1}	0.1319***	0.1219***	0.1336***	0.1162***	0.1148***	0.1195***	0.1645***	0.1578***	0.1670***	0.1423***	0.1378***	0.1407***	0.2745***	0.2718***	0.2662***
	(5.9883)	(5.6054)	(6.1088)	(6.9654)	(6.8552)	(7.1005)	(8.2988)	(8.2686)	(8.8172)	(6.2804)	(6.2243)	(6.3021)	(188.2382)	(182.7199)	(187.3154)
IO	0.0006	0.0004**	0.0006**	0.0071**	0.0072**	0.0083**	0.0055	0.0055**	0.0054**	−0.0057	−0.0052	−0.0057	0.0247***	0.0265***	0.0269***
	(0.0726)	(3.0524)	(2.0752)	(2.0270)	(2.0879)	(2.3327)	(0.6459)	(2.6479)	(3.6272)	(−0.9590)	(−0.8713)	(−0.9499)	(15.7496)	(17.3263)	(15.6703)
IIO	−0.0042	−0.0081	−0.0038	−0.0034	−0.0036	−0.0033	−0.0008**	−0.0016*	−0.0027**	0.0009	0.0003	0.0006	−0.0123***	−0.0126***	−0.0109***
	(−0.5194)	(−1.0191)	(−0.4783)	(−0.5898)	(−0.6358)	(−0.5786)	(−3.0973)	(−2.1995)	(−3.3380)	(0.1653)	(0.0479)	(0.1186)	(−12.3958)	(−12.4269)	(−11.5053)
G	−0.0374	−0.0469**	−0.0325	0.0263	0.0269	0.0251	−0.3164	−0.3062	−0.2996	−0.3930***	−0.3917***	−0.3878***	−0.0340	−0.0309	−0.0137
	(−1.2945)	(−2.0373)	(−1.1199)	(1.2585)	(1.5231)	(1.3030)	(−1.5407)	(−1.5117)	(−1.4729)	(−22.4107)	(−23.0503)	(−22.7419)	(−0.8835)	(−0.9852)	(−0.4087)
II	−0.0326***	−0.0356***	−0.0323***	−0.0035	−0.0043	−0.0043	−0.0085	−0.0080	−0.0086	0.0121*	0.0120*	0.0117*	0.0072***	0.0077***	0.0082***
	(−2.6764)	(−2.9126)	(−2.6744)	(−0.4556)	(−0.5593)	(−0.5584)	(−0.6470)	(−0.6102)	(−0.6564)	(1.8550)	(1.8579)	(1.7973)	(7.7243)	(7.4270)	(7.8716)
S	0.0207***	0.0294***	0.0247***	0.0076	0.0110*	0.0086	0.0259***	0.0323***	0.0327***	0.0137***	0.0129***	0.0142***	0.0011***	0.0025***	0.0021***
	(2.8568)	(4.3614)	(3.4082)	(1.4535)	(1.9172)	(1.4836)	(4.0817)	(4.6404)	(4.5573)	(3.2130)	(3.0516)	(3.2453)	(2.5885)	(4.6224)	(4.4630)
D	−0.0102	−0.0134	−0.0143	0.0335*	−0.0360*	0.0352*	0.0189	0.0196	0.0225	0.0271	0.0281	0.0278	0.0225***	0.0206***	0.0153***
	(−0.3104)	(−0.4160)	(−0.4336)	(−1.7670)	(−1.9414)	(−1.8603)	(0.4825)	(0.5063)	(0.5825)	(1.3949)	(1.4443)	(1.4267)	(8.3061)	(7.0504)	(5.0257)
MTB	−0.0005	0.0019	0.0007	0.0062***	0.0062***	0.0059**	0.0112**	0.0126***	0.0120***	−0.0015	−0.0020	−0.0017	0.0068***	0.0074***	0.0062***
	(−0.1309)	(0.4976)	(0.1903)	(2.6564)	(2.6335)	(2.5183)	(2.5389)	(2.8568)	(2.6924)	(−0.6516)	(−0.8727)	(−0.7195)	(21.0641)	(22.8738)	(17.3101)
ROA	0.0801*	0.0770*	0.0812**	0.0574**	0.0574**	0.0571**	0.1629***	0.1661***	0.1498***	0.0572**	0.0595**	0.0582**	0.0118***	0.0080**	0.0083**
	(1.9430)	(1.8737)	(1.9729)	(−2.5145)	(−2.5364)	(−2.5130)	(3.6891)	(3.8383)	(3.3935)	(2.2262)	(2.3329)	(2.2586)	(3.3009)	(2.2083)	(2.4384)
GE	0.0167			0.0107			0.0007			−0.0265			−0.0136***		
	(0.7730)			(0.6453)			(0.0239)			(−1.5888)			(−5.2354)		
RL		−0.0769***			−0.0180			−0.0498**			−0.0166			−0.0298***	
		(−4.3364)			(−1.3021)			(−2.3814)			(−1.2276)			(−10.5679)	
R			−0.0082			0.0023			−0.0194*			−0.0089***			−0.0036***
			(−0.9375)			(0.3077)			(−1.6977)			(−3.4048)			(−3.1574)
Constant	−0.2088**	−0.3179***	−0.2048**	−0.0285	−0.0705	−0.0539	−0.2817***	−0.3683***	−0.2499***	−0.1272**	−0.1230**	−0.0830	0.0088	−0.0174	0.0312***
	(−2.3794)	(−3.8320)	(−2.3475)	(−0.4477)	(−0.9792)	(−0.8876)	(−3.6193)	(−4.2483)	(−2.8468)	(−2.3848)	(−2.2807)	(−1.5195)	(0.9025)	(−1.5251)	(3.1091)
Observations	3,787	3,787	3,787	3,975	3,975	3,975	3,577	3,577	3,577	3,769	3,769	3,769	3,555	3,555	3,555
Number of iden	574	574	574	576	576	576	523	523	523	559	559	559	523	523	523
AR(2)	−0.67	−0.58	−0.72	−0.97	−0.84	−1.06	−0.79	−0.72	−0.73	−1.13	−1.07	−1.04	−0.72	−0.69	−0.80
Wald-test	328.3***	346.7***	307.5***	521.5***	476.2***	490.6***	663.3***	715.0***	625.5***	788.4***	729.7***	737.4***	3,433.7***	3,267.3***	3,317.1***
VIF	1.54	1.77	1.10	1.87	2.04	1.90	2.20	2.81	2.04	1.36	1.28	1.40	1.77	1.82	1.60

When the role of owners is overlapped with the duties of managers, the asymmetries of information between the principal and the agent are minimised and one would expect lower agency costs, and consequently more transparent and informative financial statements. However, the Latin American corporate sector is characterised by ownership structures highly concentrated with shareholders who hold a predominant role as insiders and managers too. The agency approach supports two competing hypotheses in this respect. The first one is the convergence hypothesis and the alternative hypothesis is known as the entrenchment hypothesis. Our findings support the entrenchment hypothesis, which demonstrates that at excessively high levels of managerial ownership, executives are insulated from shareholders' discipline, which allows managers to engage in more aggressive real activities manipulation. In fact, as emphasised by Leuz et al. (2003), in institutional contexts characterised by weak protection of investors' rights, it is more likely that financial information suffers from earnings management, and that the lack of protection encourages insiders to obfuscate firm performance and the informative content of its financial information. These facts describe the scenario we observe in the case of Latin American countries. Hence, we accept the hypothesis H2, which stated that as the insiders' ownership increases, real activities manipulation increases too, as predicted by the entrenchment view.

The rest of the results recorded in Table 5 are like those observed in the previous table. Consequently, up until now and by considering the performance-matched real activities manipulation variables, we observe that our major findings are robust across all the models.

Tables 6 and 7 replicate the findings displayed in Tables 4 and 5, respectively by using as dependent variables the non-performance matched real activities manipulation measures. As observed, all our findings remain consistent and consequently, these last couple of tables can be considered as robustness checks of our major results. Specifically speaking, Table 6 uses as a measure of ownership concentration the unadjusted variable of *OC*. We observe that ownership concentration (OC) is statistically significant in models (11), (12), (14) and (15) only, and the sign of the coefficients in these models is always negative. This finding suggests that despite the fact that the *OC* variable is skewed by construction, it still records a negative impact on real activities manipulation. This means that majority shareholders monitor managers with at least a certain level of efficiency, constraining their capacity to make discretionary decisions in their own interest. Hence, the majority shareholder behaves as an efficient corporate governance system in Latin American corporations. Concerning the institutional investor dummy variable (IIO) in both Tables 6 and 7 it still records a negative and statistically significant coefficient at the standard confidence levels, providing further support to our hypothesis H3. Regarding the insiders' ownership (IO) variable in Table 7, the findings are also consistent with those previously found.

Under the G.M.M.-S.E. linear dynamic panel-data estimation, we observe that the contextual variables are all highly statistically significant and show the expected negative signs in Tables 6 and 7. Consequently, these findings are reported as a strong robustness check of the fact that we cannot dissociate the efficiency of the legal and institutional systems from corporate governance. In other words, as the government

Table 6. Real activities manipulation (G.M.M.-S.E.). Dependent variable non-performance-matched R.A.M.

	RMCFO			RMDISX			RMPROD			RMSGA			RM		
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Dep. Var_{-t-1}	0.2738***	0.2507***	0.2645***	0.2394***	0.2236***	0.2373***	0.2250***	0.2101***	0.2143***	0.2466***	0.2322***	0.2382***	0.2139***	0.2051***	0.2104***
	(15.3533)	(13.7750)	(14.7417)	(20.3008)	(18.1872)	(19.6340)	(21.9613)	(20.1790)	(20.8920)	(21.1115)	(19.8849)	(20.2007)	(134.0923)	(120.8427)	(134.8553)
OC	−0.0065	−0.0090	−0.0111	0.0051	0.0057	0.0029	−0.0014	−0.0034	0.0003	−0.0059	−0.0080*	−0.0113**	−0.0020	−0.0035***	−0.0028**
	(−0.7412)	(−1.0615)	(−1.3052)	(1.0230)	(1.1421)	(0.5681)	(−0.1229)	(−0.3349)	(0.0231)	(−1.3476)	(−2.8451)	(−3.4468)	(−1.5225)	(−2.7466)	(−2.2082)
IIO	0.0083	0.0071	0.0090	−0.0130***	−0.0150***	−0.0133***	0.0100**	0.0077	0.0072	−0.0143***	−0.0157***	−0.0153***	−0.0066***	−0.0079***	−0.0060***
	(1.5156)	(1.3264)	(1.6931)	(−4.4166)	(−4.8902)	(−4.5065)	(2.0087)	(1.5105)	(1.4193)	(−5.0402)	(−5.3746)	(−5.1837)	(−8.3386)	(−9.1878)	(−7.3414)
G	0.0304	0.0132	0.0243	0.0119**	0.0043	0.0079	0.0168	0.0131	0.0311***	−0.0233	−0.0255	−0.0347	0.0020	−0.0069	0.0000
	(1.2148)	(0.5861)	(1.1726)	(2.3216)	(0.5679)	(0.5751)	(1.0991)	(1.1458)	(3.1415)	(−1.1701)	(−1.1885)	(−1.2420)	(0.1920)	(−0.6628)	(0.0042)
II	0.0008	0.0011	0.0012	−0.0071*	−0.0099**	−0.0075*	0.0057	0.0049	0.0041	−0.0053*	−0.0054*	−0.0058*	−0.0042***	−0.0061***	−0.0039***
	(0.1249)	(0.1689)	(0.1882)	(−1.8796)	(−2.5077)	(−1.9474)	(0.7818)	(0.6611)	(0.5658)	(−1.7317)	(−1.7586)	(−1.8365)	(−5.1427)	(−6.5840)	(−4.6447)
S	0.0052	0.0091***	0.0076**	0.0058***	0.0101***	0.0067***	0.0102***	0.0153***	0.0125***	0.0041**	0.0040**	0.0054**	−0.0043***	−0.0013***	−0.0034***
	(1.6059)	(2.7524)	(2.2503)	(3.1863)	(5.0653)	(3.5217)	(3.2312)	(5.0182)	(4.1705)	(2.0663)	(1.9613)	(2.5586)	(−9.4309)	(−2.7478)	(−8.0363)
D	−0.0024	−0.0033	−0.0019	0.0274***	0.0228**	0.0263**	0.0343	0.0067	0.0222	0.0222**	0.0242**	0.0214*	0.0100***	−0.0004	0.0037
	(−0.1093)	(−0.1505)	(−0.0874)	(2.7288)	(2.2643)	(2.5656)	(1.3752)	(0.2799)	(0.9033)	(2.0411)	(2.1625)	(1.9477)	(3.6085)	(−0.1158)	(1.2996)
MTB	0.0075***	0.0072***	0.0079***	0.0016	0.0022**	0.0014	0.0123***	0.0127***	0.0130***	0.0025**	0.0023**	0.0028**	0.0028***	0.0033***	0.0029***
	(3.2439)	(3.1253)	(3.2778)	(1.5443)	(2.0858)	(1.2630)	(5.2668)	(5.5243)	(5.4478)	(2.2293)	(2.0773)	(2.3483)	(10.6981)	(12.5839)	(9.0803)
ROA	0.1170***	0.1200***	0.1169***	−0.0173*	−0.0215**	−0.0217**	0.1066***	0.0912***	0.1029***	0.1498***	0.1500***	0.1457***	0.0005	−0.0052	−0.0030
	(4.8497)	(5.0356)	(4.7698)	(−1.7220)	(−2.0206)	(−2.1008)	(4.3126)	(3.9661)	(4.3963)	(13.5741)	(13.6808)	(12.9261)	(0.1722)	(−1.6351)	(−1.0119)
GE	−0.0293***			−0.0204***			−0.0600***			−0.0265***			−0.0056***		
	(−2.7535)			(−3.0616)			(−5.1730)			(−4.8855)			(−4.7263)		
RL		−0.0729***			−0.0534***			−0.0898***			−0.0158***			−0.0332***	
		(−6.2524)			(−8.1152)			(−8.2696)			(−2.6952)			(−20.6710)	
R			−0.0228***			−0.0157***			−0.0292***			−0.0195***			−0.0055***
			(−4.5812)			(−5.5703)			(−6.7115)			(−7.2819)			(−9.2346)
Constant	−0.0181	−0.0726*	0.0913**	−0.0229	−0.0817***	0.0628**	−0.0771**	−0.1450***	0.0716*	0.0122	0.0079	0.1164***	0.0657***	0.0328***	0.0918***
	(−0.4805)	(−1.8603)	(2.0047)	(−0.9896)	(−3.2190)	(2.4731)	(−2.0976)	(−4.0522)	(1.7760)	(0.5086)	(0.3221)	(4.5118)	(11.4089)	(5.6502)	(13.7012)
Observations	3,787	3,787	3,787	3,975	3,975	3,975	3,577	3,577	3,577	3,769	3,769	3,769	3,555	3,555	3,555
Number of iden	574	574	574	576	576	576	523	523	523	559	559	559	523	523	523
AR(2)	−3.258	−2.973	−3.370	−3.350	−3.397	−3.577	−2.901	−2.517	−2.842	−0.834	−0.615	−0.667	−0.681	−0.686	−0.755
Wald-test	6,673.4***	5,037.9***	6,157.6***	1,814.8***	1,677.0***	1,042.0***	506.5***	519.2***	496.7***	432.4***	475.0***	438.0***	183.0***	196.5***	168.0***7
VIF	2.61	2.58	2.91	2.49	2.60	3.69	4.01	3.67	3.73	2.95	2.59	2.54	3.47	3.80	4.33

Table 7. Real activities manipulation (G.M.M.-S.E.). Dependent variable non-performance matched R.A.M.

	RMCFO			RMDISX			RMPROD			RMSGA			RM		
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Dep. $Var_{..t-1}$	0.2288***	0.2152***	0.2255***	0.1916***	0.1864***	0.1874***	0.1503***	0.1452***	0.1486***	0.2588***	0.2471***	0.2543***	0.1576***	0.1585***	0.1585***
	(9.7561)	(9.4039)	(9.7405)	(13.2756)	(12.4723)	(12.7156)	(9.3625)	(9.2475)	(9.4825)	(15.6613)	(14.9778)	(15.4889)	(79.2090)	(86.7437)	(78.7739)
IO	0.0155**	0.0147**	0.0148**	0.0105***	0.0106***	0.0097***	−0.0059	−0.0047	−0.0063	0.0057	0.0057	0.0053	0.0002*	0.0052*	0.0048*
	(2.3586)	(2.2982)	(2.2592)	(3.1622)	(3.1864)	(2.8287)	(−0.8942)	(−0.7050)	(−0.9431)	(1.6348)	(1.6363)	(1.5312)	(0.1720)	(−0.0455)	(0.0351)
IIO	−0.0016	−0.0034	−0.0021	0.0005	−0.0010	−0.0004	−0.0015	−0.0031	−0.0036	−0.0014	−0.0013	−0.0036	−0.0025***	−0.0025***	−0.0024***
	(−0.2299)	(−0.5125)	(−0.3092)	(0.1219)	(−0.2630)	(−0.0985)	(−0.2147)	(−0.4484)	(−0.5179)	(−0.4609)	(−0.4168)	(−1.1909)	(−2.7547)	(−2.8148)	(−2.7669)
G	−0.0420	−0.0438	−0.0356	0.0299**	0.0218	0.0288*	−0.0086*	−0.0087	−0.0047	0.0435**	0.0467**	0.0494**	−0.0012	−0.0015	−0.0014
	(−0.9443)	(−1.0307)	(−0.7696)	(1.9670)	(1.5190)	(1.8384)	(−1.7371)	(−1.5487)	(−0.6382)	(2.0556)	(2.0346)	(2.2946)	(−0.3569)	(−0.4250)	(−0.4185)
II	0.0041	0.0051	0.0034	−0.0045	−0.0052	−0.0037	−0.0030	−0.0029	−0.0055	0.0014	0.0023	−0.0009	−0.0046***	−0.0052***	−0.0048***
	(0.6400)	(0.8080)	(0.5366)	(−0.9429)	(−1.0109)	(−0.7371)	(−0.2940)	(−0.2794)	(−0.5386)	(0.3330)	(0.5179)	(−0.2277)	(−3.5635)	(−4.1189)	(−3.9253)
S	0.0230***	0.0245***	0.0285***	0.0017	0.0087**	0.0059	0.0068	0.0053	0.0102	0.0118***	0.0109***	0.0163***	−0.0031***	−0.0020**	−0.0027***
	(3.5911)	(3.9718)	(4.1973)	(0.4018)	(2.0461)	(1.4008)	(1.1822)	(0.8926)	(1.5428)	(3.8026)	(3.4697)	(5.0308)	(−4.1301)	(−2.1874)	(−3.3835)
D	0.0145	0.0191	−0.0010	0.0110	0.0016	−0.0021	0.0332	0.0442	0.0359	0.0121	0.0151	0.0045	−0.0092***	−0.0105***	−0.0099***
	(0.5100)	(0.6832)	(−0.0330)	(0.7962)	(0.1218)	(−0.1545)	(1.1261)	(1.5033)	(1.2045)	(0.9630)	(1.1913)	(0.3559)	(−2.8806)	(−3.2782)	(−3.1547)
MTB	0.0071**	0.0065**	0.0079**	−0.0006	−0.0000	−0.0003	0.0037	0.0031	0.0044	0.0015	0.0011	0.0022	0.0010**	0.0009**	0.0010**
	(2.2473)	(2.1209)	(2.4584)	(−0.3573)	(−0.0248)	(−0.2099)	(1.0040)	(0.8593)	(1.2067)	(0.8209)	(0.5994)	(1.2055)	(2.1967)	(2.4255)	(2.2850)
ROA	0.1315***	0.1376***	0.1206***	−0.0218	−0.0226	−0.0217	0.1379***	0.1453***	0.1350***	0.1663***	0.1688***	0.1529***	0.0094**	0.0056	0.0072
	(3.7656)	(3.9498)	(3.4583)	(−1.5270)	(−1.5009)	(−1.5016)	(3.8531)	(4.1059)	(3.7595)	(10.1051)	(10.1754)	(9.2914)	(2.1458)	(1.1926)	(1.5580)
GE	−0.0257*			0.0136			−0.0314*			−0.0214**			0.0053**		
	(−1.6612)			(1.5166)			(−1.8189)			(−2.2674)			(2.3495)		
RL		−0.0429**			−0.0342***			−0.0220			−0.0073			−0.0002	
		(−2.5612)			(−4.0596)			(−1.3749)			(−0.9742)			(−0.1106)	
R			−0.0241***			−0.0103**			−0.0153*			−0.0200***			−0.0001
			(−2.9272)			(−2.0674)			(−1.9420)			(−5.3903)			(−0.1797)
Constant	−0.2652***	−0.2915***	−0.1819**	0.0265	−0.0601	0.0461	−0.0189	−0.0106	0.0256	−0.1020***	−0.0949**	−0.0323	0.0550***	0.0428***	0.0518***
	(−3.3081)	(−3.7407)	(−2.3546)	(0.5131)	(−1.1053)	(1.2834)	(−0.2717)	(−0.1464)	(0.3828)	(−2.6047)	(−2.3760)	(−0.8987)	(5.4785)	(3.5001)	(5.5072)
Observations	2,213	2,213	2,213	2,239	2,239	2,239	2,004	2,004	2,004	2,142	2,142	2,142	1,993	1,993	1,993
Number of iden	528	528	528	530	530	530	479	479	479	512	512	512	478	478	478
AR(2)	−2.275	−2.303	−2.443	−2.348	−2.063	−2.499	−2.318	−2.056	−2.589	−1.232	−1.492	−1.497	−2.486	−2.605	−2.735
Wald-test	155.7***	163.0***	162.8***	194.4***	188.3***	189.7***	142.8**	146.0**	147.7**	429.1***	413.9***	444.2***	1,276.9***	1,414.8***	1,438.3***
VIF	3.60	5.24	3.51	4.88	3.52	1.44	2.69	2.61	2.80	3.82	3.94	5.03	4.90	4.82	2.44

effectiveness (GE) improves across countries, the rule of law (RL) is efficiently enforced, and regulation (R) protects the interest across all stakeholders, there is significantly less room for managers to manipulate real activities in terms of the operating cash flows, the discretionary expenses, the production costs, and the sales and administrative expenses.

Table 8 intends to achieve two goals. On the one hand, we want it to increase the heterogeneity of the statistical analysis, and on the other hand, it intends to test all our research hypotheses simultaneously. To do so, we made up a new dummy variable that identifies the gross governance quality across country (LS). This variable takes value 1 if the country is either Brazil or Chile and zero if otherwise. In our sample, Brazil and Chile are the only countries that reported a positive average Worldwide Governance Index (Kaufmann et al., 2011); whilst Argentina, Colombia, Mexico and Peru achieved an average Worldwide Governance Index lower than zero. Recall that this indicator is ranged between -2.5 and 2.5 with greater values as the country's governance quality improves. Consequently, *LS* describes the countries with relatively better governance quality – e.g., Brazil and Chile – and the set of countries with a relatively poor governance index in our sample – e.g., Argentina, Colombia, Mexico and Peru. This is not an arbitrary classification. As suggested by Lefort (2005), Brazil and Chile are the two best scored countries in Latin America regarding their levels of governance. Similarly, Klapper and Love (2004) also rank Brazil and Chile as the leading Latin American economies concerning investor protection and corporate governance.

After the construction of *LS*, we created interacted variables that measure the joint impact of firm-level corporate governance attributes and country-level governance systems. Consequently, we created $CL\ (= OC \times LS)$, $LOCL(= LOC \times LS)$, $IOL\ (= IO \times LS)$, and $IIOL\ (= IIO \times LS)$. In order to properly check the significance of these interacted variables, we applied the linear restriction contrast to test the linear combination of coefficients. For instance, the addition of the coefficients $OC + OCL$ represents the impact of ownership concentration for the set of countries with a relatively better governance quality – Brazil and Chile – on the respective real activities manipulation variable. Therefore, OC would be the impact of ownership concentration only for the set of countries with relatively weak governance quality. In our case, these are Argentina, Colombia, Mexico and Peru. The other interacted variables receive a similar treatment.

The most remarkable findings in Table 8 support our previous results concerning the ownership concentration and its impact on real activities manipulation. For instance, we observe two significant models, 10 and 13. First, there we can see that for the set of countries with relatively good governance indicators, which is when *LS* takes value 1 – for Brazil and Chile – as the ownership concentration in hand of the majority shareholder increases, real activities manipulation decreases (for *PRMSGA* and *PRM* variables). However, this negative effect of ownership concentration on real activities manipulation is stronger for the set of countries with relatively good governance (see the coefficient corresponding to the addition of $OC + OC \times LS$) than for the set of countries with relatively poor governance systems (see the coefficient of *OC* variable in models 10 and 13). This finding allows us to suggest that the ownership

Table 8. Real activities manipulation (G.M.M.-S.E.). Dependent variable performance-matched R.A.M.

	PRMCFO			PRMDISX			PRMPROD			PRMSGA			PRM		
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Dep. Var_{-t-1}	0.1832***	0.1789***	0.1328***	0.1452***	0.1139***	0.1162***	0.1701***	0.1661***	0.1658***	0.1455***	0.1441***	0.1401***	0.1646***	0.1542***	0.1490***
	(11.9685)	(11.6307)	(6.0355)	(10.9421)	(9.6687)	(6.7327)	(13.7436)	(13.7115)	(8.8230)	(11.7696)	(12.2612)	(6.3604)	(74.7377)	(61.1239)	(31.9365)
OC	−0.0189			−0.0004			−0.0203			−0.0066**			−0.0050*		
	(−1.4554)			(−0.0451)			(−1.1330)			(−2.5638)			(−1.6976)		
OCL	0.0382*			0.0186			0.0191			−0.0054**			−0.0156***		
	(1.7769)			(1.2126)			(0.7123)			(−2.3280)			(−3.2965)		
OC + OC * LS	0.0193			0.0146			−0.0012			−0.0120**			−0.0206**		
LOC		−0.0020*			−0.0003**			−0.0010***			−0.0007			−0.0006**	
		(−1.7127)			(−3.4428)			(−3.6442)			(−0.7809)			(−2.3093)	
LOCL		0.0003			−0.0012*			−0.0016***			−0.0007			−0.0025***	
		(0.0956)			(−2.8546)			(−3.5985)			(−0.4597)			(−5.2278)	
LOC + LOC * LS −0.0031**		-0.0017					−0.0015**			-0.0026***			−0.0014		
IO			0.0043***			0.0096***			0.0115***			0.0086			0.0014**
			(4.3554)			(2.5992)			(3.9761)			(1.0295)			(2.5771)
IOL			0.0111			−0.0035**			−0.0105**			−0.0078			−0.0007***
			(0.6976)			(2.4020)			(−2.6123)			(−0.6108)			(−3.2326)
IO + IO * LS			0.0154			0.0061**			0.0010**			0.0008			0.0007***
IIO	0.0148	0.0108	−0.0072	−0.0051*	−0.0018**	0.0015	−0.0066	−0.0113*	−0.0184	0.0030	−0.0015	−0.0132**	0.0023	0.0007	0.0022
	(0.6539)	(0.9046)	(−0.8156)	(−2.9894)	(−3.8347)	(0.2158)	(−0.6101)	(−2.2200)	(−0.7497)	(0.4789)	(−0.2813)	(−2.4264)	(1.0598)	(0.4230)	(1.0189)
IIOL	−0.0267***	−0.0164	0.0081	−0.0125*	−0.0050	−0.0115	0.0183	0.0099	0.0046	−0.0189**	−0.0073	−0.0301***	−0.0130***	−0.0080***	−0.0052
	(−3.7510)	(−1.5735)	(0.5539)	(−2.7239)	(−0.6986)	(−1.0412)	(1.3166)	(0.7405)	(0.8635)	(−2.2052)	(−0.8742)	(−3.3174)	(−4.9916)	(−3.4697)	(−1.6036)
IIO + IIO * LS −0.0119***	−0.0056**	0.0009	−0.0176*		−0.0068*	−0.0100	0.0117	−0.0014*	-0.0138	−0.0159*	−0.0088	−0.0433**	−0.0107**	−0.0073*	−0.0030
G	0.0125	0.0397**	−0.0349	0.0320	0.0180	0.0291	−0.7928***	−0.7146***	−0.3301	−0.2479***	−0.1660**	−0.3834***	−0.0278***	−0.0216***	0.0073
	(0.4545)	(2.3386)	(−1.2670)	(1.4471)	(0.6594)	(1.3969)	(−27.0649)	(−54.0476)	(−1.6201)	(−2.8317)	(−2.4380)	(−22.5734)	(−6.5092)	(−7.0053)	(0.7204)
II	−0.0124	−0.0243***	−0.0322***	−0.0029	0.0012	−0.0041	−0.0121	−0.0190*	−0.0077	0.0046	0.0067	0.0113*	−0.0039***	−0.0038***	−0.0003
	(−1.3234)	(−2.6915)	(−2.6463)	(−0.4381)	(0.1852)	(−0.5285)	(−1.1655)	(−1.9318)	(−0.5833)	(0.7777)	(1.1811)	(1.7664)	(−3.1195)	(−2.7356)	(−0.1261)
S	0.0020	0.0021	0.0220***	0.0089***	0.0029	0.0078	0.0106***	0.0087*	0.0268***	0.0079***	0.0072***	0.0118***	−0.0000	0.0001	0.0031***
	(0.5261)	(0.6048)	(3.1929)	(3.6565)	(0.9658)	(1.5377)	(2.6647)	(1.9531)	(4.1883)	(2.9695)	(2.6274)	(2.8995)	(−0.0040)	(0.1652)	(2.8038)
D	0.0178	0.0038	−0.0097	−0.0248	−0.0332**	−0.0342*	0.0009***	0.0064***	0.0223	0.0188	0.0288*	0.0262	−0.0017	−0.0023	−0.0057
	(0.7522)	(0.1589)	(−0.2965)	(−1.6179)	(−2.0658)	(−1.8550)	(4.0307)	(3.2153)	(0.5829)	(1.2611)	(1.9145)	(1.3612)	(−0.2883)	(−0.4103)	(−0.8609)
MTB	0.0053***	0.0040*	−0.0001	0.0072***	0.0055***	0.0056**	0.0136***	0.0137***	0.0113***	0.0069***	0.0057***	−0.0022	0.0035***	0.0029***	0.0030***
	(2.7021)	(1.7192)	(−0.0369)	(4.7062)	(3.6913)	(2.4885)	(5.3603)	(5.1579)	(2.6228)	(3.9883)	(3.1964)	(−0.9841)	(7.8238)	(5.4556)	(3.6886)
ROA	0.0904***	0.1035***	0.0794*	−0.0031	−0.0145	−0.0545**	0.0684***	0.1259***	0.1661***	0.0703***	0.0651***	0.0561**	0.0083	0.0102**	0.0332***
	(3.8813)	(4.2895)	(1.9269)	(−0.1935)	(−0.8923)	(−2.3828)	(2.7193)	(4.3455)	(3.8401)	(4.1031)	(3.8650)	(2.2016)	(1.6443)	(1.9639)	(4.4234)
Constant	0.0170	0.0213	−0.2223***	−0.0463	0.0381	−0.0279	−0.0651	−0.0352	−0.2963***	−0.0505	−0.0503	−0.1038**	0.0175*	0.0139	−0.0251*
	(0.3866)	(0.4902)	(−2.6329)	(−1.5196)	(0.9963)	(−0.4418)	(−1.3528)	(−0.6396)	(−3.6981)	(−1.5281)	(−1.4843)	(−2.0114)	(1.6647)	(1.3482)	(−1.8799)
Observations	3,787	3,780	2,213	3,975	3,968	2,239	3,577	3,570	2,004	3,769	3,762	2,142	3,555	3,548	1,993
Number of iden	574	574	528	576	576	530	523	523	479	559	559	512	523	523	478
AR(2)	−2.426	−2.659	−2.860	−2.262	−1.846	−2.259	−0.187	−0.223	−0.119	−0.124	−0.189	−0.245	−2.113	−2.106	−2.191
Wald-test	213.1***	210.3***	604.6***	169.0***	118.2**	203.2***	985.8***	1041.0***	148.7**	224.2***	212.3***	680.1***	857.5***	592.6***	185.2***
VIF	3.02	3.49	4.31	5.27	4.99	2.05	4.21	3.92	4.20	4.38	5.92	3.59	2.23	2.05	2.77

structure as an internal governance system has a more beneficial effect on transparency in countries with better governance than in countries with poorer regulatory systems.

Once the ownership structure variable is log transformed according to Demsetz and Villalonga (2001) to prevent biases as a consequence of its non-normal distribution (LOC), the findings provide even stronger support for our previous deduction. For instance, in models 5, 8 and 14 of Table 8, all provide higher absolute and statistically significant values for the addition of $LOC + LOC \times LS$ than for the variable LOC, which represents the impact of ownership concentration on real activities manipulation for the set of countries with better governance systems and the set of countries with relatively poorer governances systems, respectively. Hence, we can deduce from these results that in countries like Brazil and Chile, with relatively better governance systems and protection of investors' rights, the monitoring role of the majority shareholder in reducing real activities manipulation is more efficient than in the rest of countries in the sample where the governance systems and transparency are relatively poor.

When regarding the insiders' ownership, the findings show in models 6, 9 and 15 that as closely held shares increase, insiders engage more actively in manipulating the financial statements in countries with relatively poor governance systems (see the coefficients of IO variable) than in countries with better governance (see the coefficient represented by $IO + IO \times LS$). In these three significant models, the coefficient of IO is greater than the coefficient represented by $IO + IO \times LS$. This provides evidence that the entrenchment problem and its negative consequences on the transparency of financial reporting are more nefarious when the institutional setting is characterised by weak protection of investors' rights.

Finally, regarding the institutional ownership, our findings in Table 8 can be used as robustness checks of the results found in the other tables. Briefly, in many cases we see that in both institutional settings of countries with relatively good and relatively poor governance systems, institutional investors are quite efficient in reducing the likelihood of real activities manipulation. Hence, summarising, we observed that the institutional system is a major determinant of the opportunistic behaviour of managers in overstating the financial reports. And that depending on the quality of the country-level governance systems, it will mould the efficiency of the companies' ownership structure as a governance device. Therefore, it would be incorrect to dissociate the joint impact that governance mechanisms, both at the company level and at the country level, can have on accounting manipulation.

Like the last source of robustness checks of our results, we re-estimated the regressions by using panel data Fixed Effects (F.E.), the Feasible Generalised Least Squared estimations (F.-G.L.S.) and the Panel-Corrected Standard Error (P.C.S.E.) as alternative econometric techniques as displayed in Table 9. This table offers just a sample of all estimations performed. In this case, we chose as dependence variable the performance-matched and the non-performance matched measures of real activities manipulation from operating cash flows defined as $PRMCFO$ and $RMCFO$, respectively. Similarly, only one contextual variable was considered in the outputs of this table, namely, government effectiveness (GE). Although such estimations also included the other multiple dependent variables used in this study as well as the other alternative

Table 9. Robustness analysis of real activities manipulation. Dependent variable P.R.M.C.F.O. and R.M.C.F.O.

	Fixed Effects (FE)				Feasible Generalised Least Square (F-GLS)				Panel-Corrected Standard Error (PCSE)			
VARIABLES	(1) PRMCFO	(2) RMCFO	(3) PRMCFO	(4) RMCFO	(5) PRMCFO	(6) RMCFO	(7) PRMCFO	(8) RMCFO	(9) PRMCFO	(10) RMCFO	(11) PRMCFO	(12) RMCFO
Dep. $Var._{t-1}$	0.2215**	0.1907***	0.1127**	0.1466***	0.1209	0.1667**	0.1011**	0.1905**	0.2079*	0.1979*	0.1760*	0.1757**
	(2.5486)	(3.0951)	(2.3550)	(5.2035)	(0.5618)	(1.4318)	(2.7053)	(2.3329)	(1.8353)	(1.9189)	(1.7424)	(2.6025)
OC	−0.0021**	−0.0034*			−0.0054	−0.0050						
	(−2.2737)	(−1.5385)			(−1.5344)	(−1.3723)						
LOC									−0.0013**	−0.0013**		
									(−2.2221)	(−2.2050)		
IO			0.0113*	0.0019			0.0090***	0.0092***			0.0059**	0.0070**
			(1.7215)	(0.3792)			(3.3509)	(3.4030)			(2.3753)	(2.6302)
G	−0.0217**	−0.0003	−0.0222	−0.0405***	−0.0420***	−0.0428***	−0.0259	−0.0286	−0.0168	−0.0166	−0.0325*	−0.0328*
	(−2.0073)	(−0.0286)	(−1.3340)	(−3.2016)	(−4.5892)	(−4.1086)	(−1.0738)	(−1.2030)	(−0.5629)	(−0.5570)	(−1.7564)	(−1.7588)
II	−0.0014	−0.0108**	0.0085	0.0028	−0.0030	−0.0027	0.0015	0.0002	−0.0029	−0.0032	0.0016	0.0017
	(−0.2600)	(−2.4066)	(1.3372)	(0.5814)	(−0.9130)	(−0.7786)	(0.4417)	(0.0591)	(−0.6196)	(−0.6769)	(0.2368)	(0.2611)
S	0.0143***	0.0025	0.0241***	0.0125***	0.0031***	0.0025***	0.0043***	0.0044***	0.0028***	0.0029***	0.0032***	−0.0030***
	(5.7832)	(1.2253)	(6.3879)	(4.3498)	(5.3444)	(4.0727)	(7.3768)	(7.6985)	(2.6659)	(2.7058)	(3.2332)	(−3.1501)
D	0.0067	−0.0050	0.0608***	−0.0092	0.0223***	0.0206***	0.0280***	0.0287***	0.0133	0.0131	0.0231**	0.0221**
	(0.5169)	(−0.4668)	(3.5278)	(−0.7015)	(4.5080)	(3.9370)	(4.9157)	(5.1437)	(1.2894)	(1.2698)	(2.2118)	(2.1417)
MTB	0.0117***	0.0067***	0.0046*	0.0014	0.0056***	0.0048***	0.0037***	0.0035***	0.0087***	0.0087***	0.0080***	0.0082***
	(6.3401)	(4.3565)	(1.8595)	(0.7809)	(7.0078)	(5.8328)	(4.3341)	(4.2015)	(6.3081)	(6.3682)	(4.7493)	(4.8880)
ROA	0.2037***	0.0074	0.2839***	0.0104	0.0888***	0.0836***	0.1406***	0.1443***	0.0397**	0.0397**	0.0606***	0.0585***
	(11.3376)	(0.4870)	(13.0889)	(0.6276)	(9.4503)	(9.0341)	(9.3381)	(9.6096)	(2.3676)	(2.3654)	(2.8844)	(2.8236)
GE	−0.0133***	−0.0107***	0.0006	−0.0054	−0.0052**	−0.0057***	−0.0001	−0.0006	−0.0122***	−0.0121***	−0.0112***	−0.0104***
	(−7.7461)	(−5.3946)	(0.1952)	(−1.5515)	(−2.4649)	(−2.5865)	(−0.0685)	(−0.2703)	(−3.5175)	(−3.4659)	(−3.1892)	(−2.8995)
Constant	0.2608***	0.1233***	0.3459***	0.2524***	0.0877***	0.0765***	0.0921***	0.0898***	0.1204***	0.1213***	0.1199***	0.1160***
	(8.5932)	(4.9396)	(7.4108)	(7.0921)	(12.1661)	(9.9914)	(11.9757)	(12.1882)	(8.7995)	(8.9761)	(8.6903)	(8.5730)
Observations	4,932	5,087	3,319	3,344	4,907	4,907	3,293	3,293	4,595	4,595	3,119	3,119
Number of iden	611	615	592	594	586	586	566	566	0.2497	0.2509	0.290	0.2908
R-squared	0.0521	0.0077	0.0747	0.0117					0.250	0.251	0.2904	0.291
F-test or Wald-test	33.90	4.944	31.39	4.632	263.9	213.9	198.6	210.1	92.03	90.09	75.97	79.34
VIF	4.68	3.87	1.45	3.98	7.92	2.34	7.55	3.46	5.61	2.28	3.71	6.08

institutional variables, for brevity they are not reported.[11] As observed in Table 9, in most of the cases, the results remain invariant and the tests of our research hypotheses produced the same results. Briefly, high persistency is still recorded under these three alternative panel data techniques. The ownership concentration consistently reports a negative impact on earnings manipulation. For F.E. and F.-G.L.S. the *OC* variable was used; whilst for P.C.S.E. method we opted for using the log transformed version of this variable (LOC) because the results were slightly more statistically significant than with the *OC* variable. As found above, the insider ownership (IO) also positively affects the real earnings management measures. Regarding the country-level variable, we observe that as government effectiveness (GE) is enhanced, managerial discretion is constrained as concluded in the other previous findings in this study. Hence, our findings are robust and consistent by using alternative estimation methods.

5. Conclusion

Under a governance approach, we analysed the impact of several ownership structure features as well as the characteristics of the institutional setting and regulatory framework in constraining the discretionary capacity of managers to misreport the earnings. Our research hypotheses were tested in a representative sample of non-financial listed companies from Argentina, Brazil, Chile, Colombia, Mexico, and Peru. Latin America provides a good opportunity to study real earnings management in a context of highly concentrated firm ownership structures in countries that exhibit weak protection of investors' rights and enforcement of the law.

This underexplored context offers several dynamics not observed in more developed institutional settings as suggested by Bajakić and Božina Beroš (2017). For instance, contrary to previous literature, the intrinsic characteristics of the Latin American corporate sector allowed us to adjust our research hypotheses by considering certain governance features that yielded interesting insights concerning the discretionary managerial behaviour. For instance, our findings lead us to the conclusion that the monitoring role played by the majority owner is critical in constraining earnings management. However, there is still room for improvements concerning certain particularities of the ownership structure of Latin American firms, such as the insider ownership. In this case, we observed strongly significant results of entrenched closely held shareholders, represented by managers, officers, directors, crossholdings and other interested stakeholders, and their negative consequences on the transparency of the reported earnings. Specifically, the results evidenced that they intend to extract private benefits at the expense of less protected minority shareholders by opportunistically managing the earnings to their own benefit. In this respect, there is a clear need for more restrictive directives, such as widely accepted code of conduct, concerning the power concentration in the Latin American corporate sector.

In agreement with our research hypotheses, our results support the arguments that the institutional system is also a major determinant of the managerial opportunistic behaviour in misreporting the financial information. In fact, the quality of the country-level governance systems moulds the efficiency of the companies' ownership structure as a governance tool. Our findings allow us to conclude that in countries with

relatively better regulatory systems, the monitoring role of the majority owner in constraining real activities manipulation is more efficient than in countries with a relatively poor institutional setting. Likewise, insiders engage more actively in manipulating the financial statement in countries with weaker institutional and regulatory systems than in countries with better legal framework. This asymmetric impact on earnings management is tangible evidence that better institutional systems contribute to more transparent accounting reports, and ultimately, to more informed financial decisions. On top of that, differing from what is widely emphasised in previous literature, this study shows the ownership structure features are not to be dissociated from the institutional system and that together they complement each other when explaining the discretionary managerial behaviour.

This study suggests some policy implications for regulators and supervisory authorities. We identify some issues of ownership structure that raise concerns about the interests of minority shareholders. The current debate in Latin America about the correct corporate governance should consider the inherent problems of ownership structures regarding the excessive power of insiders. For the Latin American region, literature has suggested that pyramidal structures, business groups, and crossholdings are a few among many other strategies to increase control power beyond voting rights (Poczter, 2018). More balanced ownership structures with less power concentration in certain groups would contribute to the long-run maximisation of all shareholders' wealth. This would prevent the expropriation of the minority owners. Hence, the new codes of good governance that are being updated and issued in several countries across the region could consider this issue. At the same time, our research also encourages policymakers to go on improving the institutional environment for better protection of the minority investors' rights.

This study is not absent of limitations. We focused on the role of ownership structure and the characteristics of the institutional environment that mould the real business activities manipulation. Corporate governance is also highly determined by features of the board of directors that are not captured in this study. Similarly, this research provided limited conclusions regarding the nature of other alternative owners such as the case of state-owned firms, or foreign investors that might trigger the manipulation of real activities in a specific way. Moreover, as suggested by Saona and San Martín (2018), a much better way to analyse the ownership structure of companies is though the relationship between the cash flow rights and voting rights of the controlling shareholder. Because of the limited access to this information across Latin American countries, we used only the direct voting rights as a measure of ownership concentration. Nevertheless, despite this limitation in the construction of this variable, our measure applied in the empirical analysis has also been widely used in the previous empirical literature in the Latin American context (Castro Martins et al., 2017; Céspedes, González, & Molina, 2010; Gonzalez et al., 2017; Lefort, 2005; Lefort & Urzúa, 2008). Finally, regarding the methodology, it also has limitation in the measurement errors of proxies for the variables of interest. For instance, the Cohen et al. (forthcoming) and Roychowdhury (2006) models we use in this study to measure abnormal operating cash flows and abnormal discretionary expenditures suffered from generic limitations. As recently emphasised by Shayan-Nia et al. (2017), one of

these problems lies in the assumption that the generation of normal, non-discretionary cash flows from operation activities as well as cash flows from discretionary expenditures are homogeneous across the estimation sample. Hence, this study does not examine specific management actions such as timing of fixed assets' sales and expenditures on research, development and innovation that are made blurry, but applies the Cohen et al. (forthcoming) and Roychowdhury (2006) models without adjustments. These further developments and other new directions remain for future research endeavours. There are other ownership structure features widely popular in Latin America, such as business groups and dual-class shares that are used as control-enhancing mechanisms. A deeper analysis of these governance tools might provide further insights on the managerial discretionary behaviour. Similarly, the composition of the firms' board of directors and its effectiveness in preventing managerial misconduct in Latin America is another un-researched field (Cuadrado-Ballesteros, García-Sánchez, & Martínez-Ferrero, 2017).

The power distribution inside the firm depends on the dynamics within the board of directors (Arzubiaga et al., 2018). Hence, independent directors who are supposed to be unbiased concerning inside interests, and the role played by female board members, or the presence of directors representing pension funds, financial institutions, or other institutional investors, can have influential consequences on the corporate governance of Latin American firms, and ultimately, in the discretionary managerial decision-making power regarding the quality of earnings. Alternatively, literature has widely supported the intuition that earnings are more actively managed in situations of financial distress (Beneish, Lee, & Nichols, 2013; Ghazali, Shafie, & Sanusi, 2015; Habib et al., 2013). Hence, another suggestion for further research is to compare the extent of real earnings management between Latin American companies designated as financially distressed and their counterparts endowed with stronger financial muscle.

Notes

1. Walker (2013) points out that most of the literature up to 2005 focuses solely on accruals-based earnings management to detect the methods firms use to manage earnings.
2. Although not reported in the tables, as an additional test of the firm-fixed effect we followed Saona and San Martín (2016) and used the Breusch and Pagan (1979) contrast to test if the estimated variance of the residuals are dependent on the values of the independent variables, known as the heteroskedasticity problem. In all the cases this test was applied, it strongly rejected the absence of firm-specific effects, suggesting that outputs with random effects leads to biased estimations.
3. Instrumental variables might also be used to control for endogeneity. Nevertheless, in a multi-country setting like this study, it is difficult to find out a free of endogeneity or purely exogenous shock that affects all the countries in our sample to the same extent as stated by Black et al. (2014). Likewise, Larcker and Rusticus (2010) indicate that when the instrument is only weakly correlated with the regressor, the instrumental variable methods can produce highly biased estimates when the instrumental variable is even slightly endogenous. In such cases, estimates are more biased and more likely to provide the wrong statistical inference than O.L.S. estimates that make no correction for endogeneity (Saona & San Martín, 2016). Hence, instrumental variable methods are not used in the econometric analysis.

4. No rejection of the null hypothesis of no second-order autocorrelation indicates that the moment conditions are valid.
5. http://info.worldbank.org/governance/wgi/#home
6. https://www.fraserinstitute.org/economic-freedom/dataset
7. These authors applied the measure of insider ownership to samples of companies from several Latin American countries, such as Chile, and companies from several developed countries that belong to the civil-law and common-law regimes. As observed, therefore, the metric for insider ownership has been already applied in the previous empirical literature in the context of emerging and developed markets.
8. The latest update took place in 2016. Information is publicly available and can be downloaded from www.govindicators.org. The six indicators included in the World Governance Index are voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption.
9. This indicator is broken down in five major areas: size of government, legal system and security of property rights, sound money, freedom to trade internationally, and regulation.
10. Nevertheless, for checking the consistency of the findings regarding the concentration of the ownership structure, we used as an alternative variable the untransformed voting rights of the majority shareholders measured as the percentage of outstanding shares in the portfolio of the controlling shareholder (OC). In various cases, this untransformed variable was statistically significant and with the expected sign. However, given that the transformed variable (LOC) reported greater consistency and higher significance than OC, for space-saving reasons, we decided to omit the results with this variable, but they are available upon request to the corresponding author.
11. Otherwise, the number of tables would increase exponentially. Nevertheless, all these results are available upon request to the corresponding author.

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References

Ali, M., Ali, I., Al-Maimani, K. A., & Park, K. (2018). The effect of organizational structure on absorptive capacity in single and dual learning modes. *Journal of Innovation & Knowledge*, *3*(3), 108–114. doi:10.1016/j.jik.2017.03.007

Alonso-Borrego, C., & Arellano, M. (1999). Symmetrically normalized instrumental variable estimation using panel data. *Journal of Business & Economic Statistics*, *17*(1), 36–49. doi:10.2307/1392237

Alves, S. (2012). Ownership structure and earnings management: Evidence from Portugal. *Australian Accounting, Business and Finance Journal*, *6*(1), 57–74.
Arellano, M. (2002). Sargan's instrumental variables estimation and the generalized method of moments. *Journal of Business & Economic Statistics*, *20*(4), 450–459.
Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equation. *The Review of Economic Studies*, *58*(2), 277–297.
Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics*, *68*(1), 29–51.
Arzubiaga, U., Iturralde, T., Maseda, A., & Kotlar, J. (2018). Entrepreneurial orientation and firm performance in family SMEs: The moderating effects of family, women, and strategic involvement in the board of directors. *International Entrepreneurship and Management Journal*, *14*(1), 217–244.
Ataay, A. (2018). Performance sensitivity of executive pay: the role of ownership structure, board leadership structure and board characteristics. *Economic Research-Ekonomska Istraživanja*, *31*(1), 1152–1168. doi:10.1080/1331677X.2018.1456951
Bajakić, I., & Božina Beroš, M. (2017). Examining agency governance in the European Union financial sector – a case-study of the European Securities and Markets Authority. *Economic Research-Ekonomska Istraživanja*, *30*(1), 1743–1757.
Ball, R., Kothari, S. P., & Robin, A. (2000). The effect of international institutional factors on properties of accounting earnings. *Journal of Accounting and Economics*, *29*(1), 1–51.
Ball, R., Robin, A., & Wu, J. S. (2003). Incentives versus standards: Properties of accounting income in four East Asian countries. *Journal of Accounting and Economics*, *36*(1-3), 235–270.
Baltagi, B. H. (2013). *Econometric analysis of panel data* (5th ed.), Chichester, UK: John Wiley & Sons Ltd.
Beck, N., & Katz, J. N. (1995). What to do (and not to do) with time-series cross-section data. *American Political Science Review*, *89*(3), 634–647. doi:10.2307/2082979
Bekiris, F. V., & Doukakis, L. C. (2011). Corporate governance and accruals earnings management. *Managerial and Decision Economics*, *32*(7), 439–456. doi:10.1002/mde.1541
Benavides-Espinosa, M. D M., & Roig-Dobón, S. (2011). The influence of cultural differences in cooperative learning through joint ventures. *Service Business*, *5*(1), 69–85. doi:10.1007/s11628-011-0102-1
Beneish, M. D. (1997). Detecting GAAP violation: Implications for assessing earnings management among firms with extreme financial performance. *Journal of Accounting and Public Policy*, *16*(3), 271–309. doi:10.1016/S0278-4254(97)00023-9
Beneish, M. D., Lee, C. M. C., & Nichols, D. C. (2013). Earnings manipulation and expected returns. *Financial Analysts Journal*, *69*(2), 57–82. doi:10.2469/faj.v69.n2.1
Benkraiem, R. (2008). The influence of institutional investors on opportunistic earnings management. *International Journal of Accounting, Auditing and Performance Evaluation*, *5*(1), 89–106. doi:10.1504/IJAAPE.2008.020195
Bennedsen, M., & Nielsen, K. M. (2010). Incentive and entrenchment effects in European ownership. *Journal of Banking & Finance*, *34*(9), 2212–2229.
Berlin, M., & Loeys, J. (1988). Bond covenants and delegated monitoring. *The Journal of Finance*, *43*(2), 397–412. doi:10.2307/2328467
Black, B., de Carvalho, A. G., Khanna, V., Kim, W., & Yurtoglu, B. (2014). Methods for multi-country studies of corporate governance: Evidence from the BRIKT countries. *Journal of Econometrics*, *183*(2), 230–240. doi:10.1016/j.jeconom.2014.05.013
Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, *87*(1), 115–143. doi:10.1016/S0304-4076(98)00009-8
Braam, G., Nandy, M., Weitzel, U., & Lodh, S. (2015). Accrual-based and real earnings management and political connections. *The International Journal of Accounting*, *50*(2), 111–141. doi:10.1016/j.intacc.2013.10.009

Breusch, T. S., & Pagan, A. R. (1979). A simple test for heteroscedasticity and random coefficient Variation. *Econometrica*, *47*(5), 1287–1294. doi:10.2307/1911963

Brickley, J. A., Lease, R. C., & Smith, C. W. Jr, (1988). Ownership structure and voting on antitakeover amendments. *Journal of Financial Economics*, *20*, 267–291. doi:10.1016/0304-405X(88)90047-5

Brown, P., Beekes, W., & Verhoeven, P. (2011). Corporate governance, accounting and finance: A review. *Accounting & Finance*, *51*(1), 96–172. doi:10.1111/j.1467-629X.2010.00385.x

Callao, S., Cimini, R., & Jarne, J. I. (2016). Value relevance of accounting figures in presence of earnings management. Are enforcement and ownership diffusion really enough?. *Journal of Business Economics and Management*, *17*(6), 1286–1299. doi:10.3846/16111699.2016.1203816

Castro Martins, H., Schiehll, E., & Soares Terra, P. R. (2017). Country-level governance quality, ownership concentration, and debt maturity: A comparative study of Brazil and Chile. *Corporate Governance: An International Review*, *25*(4), 236–254. doi:10.1111/corg.12192

Céspedes, J., González, M., & Molina, C. A. (2010). Ownership and capital structure in Latin America. *Journal of Business Research*, *63*(3), 248–254. doi:10.1016/j.jbusres.2009.03.010

Choi, I. (2001). Unit root tests for panel data. *Journal of International Money and Finance*, *20*(2), 249–272. doi:10.1016/S0261-5606(00)00048-6

Chung, R., Firth, M., & Kim, J.-B. (2002). Institutional monitoring and opportunistic earnings management. *Journal of Corporate Finance*, *8*(1), 29–48. doi:10.1016/S0929-1199(01)00039-6

Cohen, D. A., & Zarowin, P. (2010). Accrual-based and real earnings management activities around seasoned equity offerings. *Journal of Accounting and Economics*, *50*(1), 2–19. doi:10.1016/j.jacceco.2010.01.002

Cohen, D. A., Dey, A., & Lys, T. Z. (2008). Real and accrual-based earnings management in the pre- and post- Sarbanes-Oxley periods. *The Accounting Review*, *83*(3), 757–787. doi:10.2308/accr.2008.83.3.757

Cohen, D., Pandit, S., Wasley, C., & Zach, T. (forthcoming). *Measuring real activity management*. Canada: Contemporary Accounting Research.

Cuadrado-Ballesteros, B., García-Sánchez, I.-M., & Martínez-Ferrero, J. (2017). The impact of board structure on CSR practices on the international scale. *European Journal of International Management*, *11*(6), 633–659.

de Miguel, A., Pindado, J., & de la Torre, C. (2005). How do entrenchment and expropriation phenomena affect control mechanisms?. *Corporate Governance: An International Review*, *13*(4), 505–516. doi:10.1111/j.1467-8683.2005.00445.x

Dechow, P. M., Ge, W., Larson, C. R., & Sloan, R. G. (2011). Predicting material accounting misstatements. *Contemporary Accounting Research*, *28*(1), 17–82. doi:10.1111/j.1911-3846.2010.01041.x

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *Accounting Review*, *70*(2), 193–225.

Dechow, P., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics*, *50*(2-3), 344–401. doi:10.1016/j.jacceco.2010.09.001

Demirguç-Kunt, A., & Maksimovic, V. (1998). Law, finance, and firm growth. *The Journal of Finance*, *53*(6), 2107–2137. doi:10.1111/0022-1082.00084

Demirgüç-Kunt, A., Laeven, L., & Levine, R. (2004). Regulations, market structure, institutions, and the cost of financial intermediation. *Journal of Money, Credit and Banking*, *36*(3), 593–622. doi:10.1353/mcb.2004.0045

Demsetz, H., & Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of Corporate Finance*, *7*(3), 209–233. doi:10.1016/S0929-1199(01)00020-7

Dick, M., Mitter, C., Feldbauer-Durstmüller, B., & Pernsteiner, H. (2017). The impact of finance and governance on the internationalisation modes of family firms. *European J. Of International Management*, *11*(1), 42–64. doi:10.1504/EJIM.2017.10001684

Duggal, R., & Millar, J. A. (1994). Institutional investors, antitakeover defenses and success of hostile takeover bids. *The Quarterly Review of Economics and Finance*, *34*(4), 387–402. doi:10.1016/1062-9769(94)90022-1

Elyasiani, E., Jia, J., & Mao, C. X. (2010). Institutional ownership stability and the cost of debt. *Journal of Financial Markets*, *13*(4), 475–500. doi:10.1016/j.finmar.2010.05.001

Fan, J. P. H., & Wong, T. J. (2002). Corporate ownership structure and the informativeness of accounting earnings in East Asia. *Journal of Accounting and Economics*, *33*(3), 401–425. doi:10.1016/S0165-4101(02)00047-2

Farooqi, J., Harris, O., & Ngo, T. (2014). Corporate diversification, real activities manipulation, and firm value. *Journal of Multinational Financial Management*, *27*, 130–151. doi:10.1016/j.mulfin.2014.06.010

Felício, J. A., Rodrigues, R., Grove, H., & Greiner, A. (2018). The influence of corporate governance on bank risk during a financial crisis. *Economic Research-Ekonomska Istraživanja*, *31*(1), 1078–1090. doi:10.1080/1331677X.2018.1436457

Fernández, V. (2014). Stock volatility and pension funds under an individual capitalization-based system. *Journal of Business Research*, *67*(4), 536–541.

Filatotchev, I., Jackson, G., & Nakajima, C. (2013). Corporate governance and national institutions: A review and emerging research agenda. *Asia Pacific Journal of Management*, *30*(4), 965–986. doi:10.1007/s10490-012-9293-9

Gabrielsen, G., Gramlich, J. D., & Plenborg, T. (2002). Managerial ownership, information content of earnings, and discretionary accruals in a non–US setting. *Journal of Business Finance & Accounting*, *29*(7-8), 967–988.

Ghazali, A. W., Shafie, N. A., & Sanusi, Z. M. (2015). Earnings management: An analysis of opportunistic behaviour, monitoring mechanism and financial distress. *Procedia Economics and Finance*, *28*, 190–201. doi:10.1016/S2212-5671(15)01100-4

Goh, J., Lee, H. Y., & Lee, J. W. (2013). Majority shareholder ownership and real earnings management: Evidence from Korea. *Journal of International Financial Management & Accounting*, *24*(1), 26–61. doi:10.1111/jifm.12006

Gonzalez, A. C., Rodriguez, Y., & Sossa, A. (2017). Leadership and governance decisions in family business performance: An application of fuzzy sets logic. *Journal of Small Business Strategy*, (1), 51–66. %V 27.

Gonzalez, M., Molina, C. A., Pablo, E., & Rosso, J. W. (2017). The effect of ownership concentration and composition on dividends: Evidence from Latin America. *Emerging Markets Review*, *30*, 1–18. doi:10.1016/j.ememar.2016.08.018

Graham, J. R., Harvey, C. R., & Rajgopal, S. (2005). The economic implications of corporate financial reporting. *Journal of Accounting and Economics*, *40*(1-3), 3–73. doi:10.1016/j.jacceco.2005.01.002

Gugler, K., Mueller, D. C., & Yurtoglu, B. B. (2008). Insider ownership, ownership concentration and investment performance: An international comparison. *Journal of Corporate Finance*, *14*(5), 688–705. doi:10.1016/j.jcorpfin.2008.09.007

Gunny, K. A. (2010). The relation eetween earnings management using real activities manipulation and future performance: Evidence from meeting earnings benchmarks. *Contemporary Accounting Research*, *27*(3), 855–888. doi:10.1111/j.1911-3846.2010.01029.x

Habib, A., Uddin Bhuiyan, B., & Islam, A. (2013). Financial distress, earnings management and market pricing of accruals during the global financial crisis. *Managerial Finance*, *39*(2), 155–180.

Han, S., Kang, T., Salter, S., & Yoo, Y. K. (2010). A cross-country study on the effects of national culture on earnings management. *Journal of International Business Studies*, *41*(1), 123–141. doi:10.1057/jibs.2008.78

Hansen, L. P. (1982). Large sample properties of Generalized Method of Moments estimators. *Econometrica*, *50*(4), 1029–1054. doi:10.2307/1912775

Hashim, H. A., & Devi, S. S. (2012). Institutional monitoring and earnings quality in Malaysia. *Procedia - Social and Behavioral Sciences*, *65*, 419–426. doi:10.1016/j.sbspro.2012.11.143

Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica*, *46*(6), 1251–1271. doi:10.2307/1913827

Healy, P. M., & Wahlen, J. M. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons*, *13*(4), 365–383. doi:10.2308/acch.1999.13.4.365

Ho, L.-C. J., Liao, Q., & Taylor, M. (2015). Real and accrual-based earnings management in the pre- and post-IFRS periods: Evidence from China. *Journal of International Financial Management & Accounting*, *26*(3), 294–335. doi:10.1111/jifm.12030

Hope, O.-K. (2003). Firm-level disclosures and the relative roles of culture and legal origin. *Journal of International Financial Management and Accounting*, *14*(3), 218–248. doi:10.1111/1467-646X.00097

Huang, H. H., Wang, W., & Zhou, J. (2013). Shareholder rights, insider ownership and earnings management. *Abacus*, *49*(1), 46–73. doi:10.1111/j.1467-6281.2012.00390.x

James, J., Shivaram, R., & Mohan, V. (2002). Institutional ownership and the extent to which stock prices reflect future earnings. *Contemporary Accounting Research*, *19*(1), 117–145.

Jara, M., López, F., & López-de-Foronda, Ó. (2012). Does the influence of institutional investors depend on the institutional framework? An international analysis. *Applied Economics*, *44*(3), 265–278. doi:10.1080/00036846.2010.502112

Jara, M., López-Iturriaga, F., San Martín, P., Saona, P., & Tenderini, G. (2019). Chilean pension fund managers and corporate governance: The impact on corporate debt. *The North American Journal of Economics and Finance*, *48*, 321–337. doi:10.1016/j.najef.2019.02.012

Jara, M., López-Iturriaga, F., San-Martín, P., & Saona, P. (2018). Corporate governance in Latin American firms: Contestability of control and firm value. *BRQ Business Research Quarterly*,

Jiraporn, P., Kim, Y. S., & Mathur, I. (2008). Does corporate diversification exacerbate or mitigate earnings management?: An empirical analysis. *International Review of Financial Analysis*, *17*(5), 1087–1109. doi:10.1016/j.irfa.2007.10.001

Johnson, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2000). Tunneling. *American Economic Review*, *90*(2), 22–27. doi:10.1257/aer.90.2.22

Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research*, *29*(2), 193–228. doi:10.2307/2491047

Kang, S.-A., & Kim, Y.-S. (2012). Effect of corporate governance on real activity-based earnings management: Evidence from Korea. *Journal of Business Economics and Management*, *13*(1), 29–52. doi:10.3846/16111699.2011.620164

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2011). The Worldwide Governance Indicators: Methodology and analytical issues. *Hague Journal on the Rule of Law*, *3*(02), 220–246. doi:10.1017/S1876404511200046

Kazemian, S., & Sanusi, Z. M. (2015). Earnings management and ownership structure. *Procedia Economics and Finance*, *31*, 618–624. doi:10.1016/S2212-5671(15)01149-1

Kim, Y., & Park, M. S. (2014). Real activities manipulation and auditors' client-retention decisions. *The Accounting Review*, *89*(1), 367–401. doi:10.2308/accr-50586

Klapper, L. F., & Love, I. (2004). Corporate governance, investor protection, and performance in emerging markets. *Journal of Corporate Finance*, *10*(5), 703–728.

Kloepfer, K., & Castrogiovanni, G. J. (2018). Entrepreneurship: Venture creation subprocesses, subdomains, and interfaces. *International Entrepreneurship and Management Journal*, *14*(3), 681–696. doi:10.1007/s11365-018-0508-5

Koh, P.-S. (2003). On the association between institutional ownership and aggressive corporate earnings management in Australia. *The British Accounting Review*, *35*(2), 105–128. doi:10.1016/S0890-8389(03)00014-3

Koh, P.-S. (2007). Institutional investor type, earnings management and benchmark beaters. *Journal of Accounting and Public Policy*, *26*(3), 267–299. doi:10.1016/j.jaccpubpol.2006.10.001

Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics*, *39*(1), 163–197. doi:10.1016/j.jacceco.2004.11.002

La Porta, R., Lopez-De-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *The Journal of Finance*, *54*(2), 471–517. doi:10.1111/0022-1082.00115

La Porta, R., Lopez-De-Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. *Journal of Financial Economics*, *58*(1-2), 3–27. doi:10.1016/S0304-405X(00)00065-9

Larcker, D. F., & Rusticus, T. O. (2010). On the use of instrumental variables in accounting research. *Journal of Accounting and Economics*, *49*(3), 186–205. doi:10.1016/j.jacceco.2009.11.004

Lassoued, N., Ben Rejeb Attia, M., & Sassi, H. (2017). Earnings management and ownership structure in emerging market. *Managerial Finance*, *43*(10), 1117–1136. doi:10.1108/MF-11-2015-0312

Lee, C.-C., Chen, M.-P., & Ning, S.-L. (2017). Why did some firms perform better in the global financial crisis? *Economic Research-Ekonomska Istraživanja*, *30*(1), 1339–1366.

Lefort, F. (2005). Ownership structure and corporate governance in Latin America. *Revista ABANTE*, *8*(1), 55–84.

Lefort, F., & Urzúa, F. (2008). Board independence, firm performance and ownership concentration: Evidence from Chile. *Journal of Business Research*, *61*(6), 615–622. doi:10.1016/j.jbusres.2007.06.036

Lefort, F., & Walker, E. (2000). Corporate governance: Challenges for Latin America. *Revista ABANTE*, *2*(2), 99–111.

Lefort, F., & Walker, E. (2007). Do markets penalize agency conflicts between controlling and minority shareholders? Evidence from Chile. *The Developing Economies*, *45*(3), 283–314. doi:10.1111/j.1746-1049.2007.00044.x

Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings management and investor protection: An international comparison. *Journal of Financial Economics*, *69*(3), 505–527. doi:10.1016/S0304-405X(03)00121-1

López, F., & Santana-Martín, D. J. (2015). Do shareholder coalitions modify the dominant owner's control? The impact on dividend policy. *Corporate Governance: An International Review*, n/a-n/a. doi:10.1111/corg.12126

López, F., & Saona, P. (2005). Earnings management and internal mechanisms of corporate governance: Empirical evidence from Chilean firms. *Corporate Ownership & Control*, *3*(1), 17–29.

Masmoudi Ayadi, W. (2014). The relationship between ownership structure and earnings quality in the French context. *2014*, *2*(2), 80–87.

Mellado-Cid, C., Jory, S. R., & Ngo, T. N. (2018). Real activities manipulation and firm valuation. *Review of Quantitative Finance and Accounting*, *50*(4), 1201–1226.

Morck, R., Shleifer, A., & Vishny, R. W. (1988). Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics*, *20*(0), 293–315. doi:10.1016/0304-405X(88)90048-7

Njah, M., & Jarboui, A. (2015). Institutional investors, corporate governance, and earnings management around merger: evidence from French absorbing firms. *Journal of Economics Finance and Administrative Science*, *20*(38), 89–96. doi:10.1016/S2077-1886(13)70033-7

Palacios-Marqués, D., Roig-Dobón, S., & Comeig, I. (2017). Background factors to innovation performance: Results of an empirical study using fsQCA methodology. *Quality & Quantity*, *51*(5), 1939–1953. doi:10.1007/s11135-016-0414-2

Pardo-del-Val, M., Martínez-Fuentes, C., & Roig-Dobón, S. (2012). Participative management and its influence on organizational change. *Management Decision*, *50*(10), 1843–1860. doi:10.1108/00251741211279639

Pelucio-Grecco, M. C., Geron, C. M., Begas, G., & Cavalcante, J. P. (2014). The effect of IFRS on earnings management in Brazilian non-financial public companies. *Emerging Markets Review*, *21*, 42–66. doi:10.1016/j.ememar.2014.07.001

Poczter, S. (2018). Business groups in emerging markets: A survey and analysis. *Emerging Markets Finance and Trade*, *54*(5), 1150–1182. doi:10.1080/1540496X.2017.1286587

Rachisan, P. R., Bota-Avram, C., & Grosanu, A. (2017). Investor protection and country-level governance: Cross-country empirical panel data evidence. *Economic Research-Ekonomska Istraživanja*, *30*(1), 806–817. doi:10.1080/1331677X.2017.1311226

Rajan, R. G., & Winton, A. (1995). Covenants and collateral as incentives to monitor. *The Journal of Finance*, *50*(4), 1113–1146. doi:10.2307/2329346

Rogers, W. H. (1993). Regression standard errors in clustered samples. *Stata Technical Bulletin*, *13*, 19–23.

Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics*, *42*(3), 335–370. doi:10.1016/j.jacceco.2006.01.002

Saona, P. (2016). Intra- and extra-bank determinants of Latin American banks' profitability. *International Review of Economics & Finance*, *45*(1), 197–214. doi:10.1016/j.iref.2016.06.004

Saona, P., & Muro, L. (2018). Firm- and country-level attributes as determinants of earnings management: An analysis for Latin American firms. *Emerging Markets Finance and Trade*, *54*(12), 2736–2764. doi:10.1080/1540496X.2017.1410127

Saona, P., & San Martín, P. (2016). Country level governance variables and ownership concentration as determinants of firm value in Latin America. *International Review of Law and Economics*, *47*(1), 84–95. doi:10.1016/j.irle.2016.06.004

Saona, P., & San Martín, P. (2018). Determinants of firm value in Latin America: An analysis of firm attributes and institutional factors. *Review of Managerial Science*, *12*(1), 65–112. doi:10.1007/s11846-016-0213-0

Saona, P., San Martín, P., & Jara, M. (2018). Group affiliation and ownership concentration as determinants of capital structure decisions: Contextualizing the facts for an emerging economy. *Emerging Markets Finance and Trade*, *54*(14), 3312–3329. doi:10.1080/1540496X.2017.1392850

Saona, P., Slocum, A., Muro, L., & Moreno, G. (2017). Earnings quality and market performance in LATAM corporations: A combined agency and cognitive approach to investors' perceptions of managerial information. In O. L. Emeagwali (Ed.), *Corporate Governance and Strategic Decision Making* (pp. 177–198). Rijeka: InTech.

Shayan-Nia, M., Sinnadurai, P., Mohd-Sanusi, Z., & Hermawan, A.-N. A. (2017). How efficient ownership structure monitors income manipulation? Evidence of real earnings management among Malaysian firms. *Research in International Business and Finance*, *41*, 54–66. doi:10.1016/j.ribaf.2017.04.013

Shen, C.-H., & Chih, H.-L. (2005). Investor protection, prospect theory, and earnings management: An international comparison of the banking industry. *Journal of Banking & Finance*, *29*(10), 2675–2697. doi:10.1016/j.jbankfin.2004.10.004

Shen, C.-H., & Chih, H.-L. (2007). Earnings management and corporate governance in Asia's emerging markets. *Corporate Governance: An International Review*, *15*(5), 999–1021. doi:10.1111/j.1467-8683.2007.00624.x

Siregar, S. V., & Utama, S. (2008). Type of earnings management and the effect of ownership structure, firm size, and corporate-governance practices: Evidence from Indonesia. *The International Journal of Accounting*, *43*(1), 1–27. doi:10.1016/j.intacc.2008.01.001

Teshima, N., & Shuto, A. (2008). Managerial ownership and earnings management: Theory and empirical evidence from Japan. *Journal of International Financial Management & Accounting*, *19*(2), 107–132. doi:10.1111/j.1467-646X.2008.01018.x

Torres, P., & Augusto, M. (2017). The impact of experiential learning on managers' strategic competencies and decision style. *Journal of Innovation & Knowledge*, *2*(1), 10–14. doi:10.1016/j.jik.2016.06.001

Tsai, H., & Gu, Z. (2007). The relationship between institutional ownership and casino firm performance. *International Journal of Hospitality Management*, *26*(3), 517–530.

Vallelado, E., Saona, P., & San Martín, P. (2017). How regulation affects the relevance of bank-debt maturity as a control mechanism in developed countries. *Journal of Business Economics and Management*, *18*(1), 116–130. doi:10.3846/16111699.2016.1149878

Velury, U., & Jenkins, D. S. (2006). Institutional ownership and the quality of earnings. *Journal of Business Research*, *59*(9), 1043–1051. doi:10.1016/j.jbusres.2006.05.001

Walker, M. (2013). How far can we trust earnings numbers? What research tells us about earnings management. *Accounting and Business Research*, *43*(4), 445–481. doi:10.1080/00014788.2013.785823

Yang, C.-Y., Lai, H.-N., & Leing Tan, B. (2008). Managerial ownership structure and earnings management. *Journal of Financial Reporting and Accounting*, *6*(1), 35–53. doi:10.1108/19852510880000634

Zang, A. Y. (2012). Evidence on the trade-off between real activities manipulation and accrual-based earnings management. *The Accounting Review*, *87*(2), 675–703. doi:10.2308/accr-10196

Zhang, Y., Perols, J., Robinson, D., & Smith, T. (2018). Earnings management strategies to maintain a string of meeting or beating analyst expectations. *Advances in Accounting*, *43*, 46–55. doi:10.1016/j.adiac.2018.09.001