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The Impacts of Board Independence on Earnings Manipulation: Empirical Research in Vietnam

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Abstract: Using research on listed firms in Vietnamese stock market, the goal of this study is to investigate the impact of board independence on earnings manipulation. This study used a sample of Vietnamese listed firms that were listed on the Vietnam stock exchange between 2016 and 2020. Discretionary accruals (DA) are used as a proxy for earnings manipulation in this study. The adjusted Jones model of Kothari et al. (2005) was employed to recognize DA of these companies. In order to control for time-variant endogeneity, the study additionally uses a fixed effect model with a panel data framework. This paper figured out that board independence has a negative and significant relationship with earnings manipulation. The results are essential to policymakers and investors by giving them with a broader perspective on developing well-defined policies, evaluating the firm's performance using usable information, and monitoring managers' earnings manipulation actions. Furthermore, the study also helps the shareholders to get understanding that having independent directors on board will lead to a decrease in earnings manipulations.

Keywords: Board independence, earnings manipulation, Vietnamese listed firms, discretionary accruals (DA)

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1. Introduction

1.1. Research Background and Research Motivation

Due to the rapid economic growth and significant involvement in the global economy, developing markets have received a lot of academic attention in recent years (Hoskisson et al., 2000). Despite fast growth, the accuracy and quality of the financial reporting information conducted by several corporations in those countries remains a source of concern for users and researchers (Wang and Yung, 2011; Li, Ho Park and Shuji Bao, 2014; Switzer, Tu and Wang, 2018). Several accounting scandals have arisen in recent decades, exposing unethical practices and emphasizing the importance of financial data reliability and clarity (Lang and Lundholm, 2000). Managers have abused the accounting policy's flexibility to manipulate earnings (Parfet, 2000). As a result, earnings manipulation is a critical problem in emerging nations, as it can affect corporate alliances and foreign investment (Chen, Elder and Hsieh, 2007).

Corporate failures have resulted in earnings manipulation, which has become a major source of concern for investors. Boards of directors, in particular, are in charge of making decisions. On the other hand, there are several reasons why managers' decisions no longer optimize shareholder wealth and lead to organizational failures. The agency hypothesis is mentioned in this case (Jensen

and Meckling, 1976). Furthermore, according to Argüden (2010), the quality of corporate governance is determined by the membership of the board of directors, the decision-making process, and the organizational structure of the company. The board of directors is regarded as the company's beating heart, having the power to define strategy, structure, and oversee the entire operation (Pudjiastuti and Mardiyah, 2007). As a result, corporate governance has been heavily used to limit earnings manipulation (Kent, Routledge and Stewart, 2010). (González and Garca-Meca, 2014). A high degree of company governance can reduce earnings manipulation and avoid unethical behaviors and fraudulence on financial statements. High corporate governance has also been shown to reduce the level of firm bankruptcies and have a favorable influence on the welfare of shareholders and other associated parties (Fich and Shivdasani, 2006; Cheng, Aerts, and Jorissen, 2010; González and Garca-Meca, 2014). Particularly, for the board composition, the board should comprise a balance of exectutive directors (headed up by the Chief executive) and non-executive directors (headed up by the chairman). Having the balanced board will mean that board decisions are not influenced by on group of directors. With the publication of Circular 121/2012/TT-BTC (hereinafter, Circular 121) on July 26, 2012, Vietnam had a corporate governance reform. The most important reform was the necessity for board independence: in all publicly traded firms, independent directors must make up at least one-third of the board of directors. This is also the first Vietnamese legal document to fully identify and define the terms "non-executive directors" and "independent directors." It states that independent directors must not have a direct relationship with any key shareholders, large suppliers, large customers, legal advisors, or external auditors of the company, in addition to being nonexecutive. A few studies has studied the effectiveness of Circular 121 in improving board independence and minimizing earnings manipulation among Vietnamese firms since its introduction. However, there are reasons to believe that a more independent board of directors aids to deter the manipulation of earnings.

The above-mentioned states the impacts of corporate governance, especially board independence, on earnings manipulation in Vietnam. Vietnam is an emerging market in its early stages of development, as opposed to developed markets in Western countries. According to previous research, developing-country enterprises have more earnings management than developed-country firms (Li, Selover and Stein, 2011; Li, Ho Park and Shuji Bao, 2014). As a result, Vietnam presents an intriguing context in which to thoroughly investigate this subject.

The study adds to the literature on earnings manipulation in the following ways. It provides valuable insight into the practice of earnings manipulation in the Vietnamese setting, which is affected by boards. It will be easier for executive directors to manipulate earnings works without independent directors. The research is useful in that it gives policymakers a comprehensive perspective on which policies and corporate governance mechanisms to implement. Furthermore, rather than relying on conventional channels, such as financial statements, investors may be aware of how to analyze corporate success.

The research is organized into five part, including this introduction. The second part begins with a summary of the theoretical foundation and hypothesis development. The sample and methodology used in this study are discussed in part 3. The findings of the investigation are described in part 4. The conclusion, limitations, and scope for further research in this field are presented in the last part.

2. Literature review and hypotheses development

2.1 Earnings Management

When managers manipulate the financial reporting process, this is known as earnings manipulation. Currently, investors are likely to consider earnings to be the most useful information on the financial statement when evaluating the firm's prospects. Another point of view is that a company's stock price, whether greater or lower, is thought to be vulnerable to earnings manipulation (Guthrie and Sokolowsky, 2010). According to Xie et al. (2003), CEO compensation would be determined by how well the boards met the earnings target. As a result, there is a potential that executives manipulate financial reporting information to deceive both insiders and outsiders about the company's performance. Earnings manipulation, however, is said to be destructive to a company's value because it lowers the quality of financial reporting (Jiraporn et al., 2008). Furthermore, earnings management could jeopardize the fortunes of stockholders (Park and Shin, 2004).

Real earnings management and accrual-based earnings management are the two types of earnings management (Gunny, 2010). Accrual-based earnings management, as defined by Dechow & Skinner (2000), illustrates the setting in which managers undertake biased earnings manipulation within generally accepted accounting principles (GAAP) accounting alternatives. Accruals are designed to be used to show the integrity of daily accounting operations, however the accounting standards also leave important openings for administrative discretion. These discretions, such as revenue timing, allowance for irrecoverable debt, impairment of fixed assets, changing depreciation techniques, and so on, may result in a lack of transparency in corporate transactions. Despite the fact that these methods impair the transparency of economic transactions, managers are not directly responsible for business operations. Real activity manipulation, on the other hand, is defined by Roychowdhury (2006) as "departures from normal operational processes, motivated by managers' aim to deceive at least some stakeholders into believing particular financial reporting targets have been fulfilled in the usual course of operations. Managers manipulate real earnings by altering the structure or timing of actual occurrences with the goal of influencing the accounting system's outcomes. Managers may control earnings by engaging in real-world actions such as cutting discretionary spending, overproduction, and revenue manipulation. Enhancing sales promotions, providing excessive discounts, and offering flexible credit policies, in particular, may be able to improve revenues in a short period of time. Furthermore, more recent evidence suggests that genuine profits manipulation is supported by reducing maintenance, advertising, and research and development (R&D) costs in order to generate earnings (Graham, Harvey and Rajgopal, 2005). As a result, real earnings are examined under the supervision of auditors or financial analysts.

Examining real earnings management under the scrutiny of auditors or financial analysts is so problematic. The focus of this research will be on the use of discretionary accruals as a proxy for earnings management.

2.3 Hypothesis development

Independent directors who have no material or pecuniary relationship with the firms yet sit fees, according to Finkelstein, Hambrick, and Cannella (2009). According to prior agency perspectives, the board of directors fails to monitor successfully without their independence in managing (Dechow et al., 1996; Beasley, 1996), therefore independent directors will perform well in controlling and managing the business (Fama and Jensen, 1983a). Because of their management knowledge, the board should usually be made up of inside directors who also act as top executive managers. Inside directors, on the other hand, may be harmful owing to conflicts of interest. As a result, the involvement of outside directors is necessary to ensure the wealth of the shareholders (Peasnell, Pope, & Young, 2003). According to Kiel & Nicholson (2003), independent directors play a vital role in protecting shareholders from managers' opportunistic behavior. There have been several attempts to look into the relationship between earnings manipulation and board independence. Klein was the first to demonstrate this link in an experimental setting (2002). Using a US database, he discovered a negative association between anomalous accruals and board independence in his seminal study. Similarly, Xie et al. (2003) point to a negative and substantial link between outside directors with corporate experience and discretionary accrual, implying that outside directors with corporate experience are more likely to keep an eye on the companies. Peasnell et al. (2005) contrasted the lower level of pre-managed earnings to the prior year's reported earnings to establish the favorable benefits of outside directors on the management of a UK listed company. Under the condition of earnings manipulation, Jaggi, Leung, and Gul (2009) discovered a negative and substantial link between board independence and earnings manipulation in Hong Kong.

Using the largest corporations in the S&P 100 Index as a sample, it is suggested that a higher percentage of board independence leads to fewer discretionary accruals (Cornett, Marcus and Tehranian, 2008). Similarly, Kent et al. (2010) investigates the negative direction of the coefficient in the relationship between board independence and discretionary accruals.

Nonetheless, independent directors, according to Raheja (2005), have less information than inside directors. Outside directors' management roles may be hampered by a lack of critical information, even if they are provided access to information management. Knowing that outside directors face challenges in obtaining information for monitoring, for example, managers may resent sharing the necessary information with them (Harris & Raviv, 2006; Adams & Ferreira, 2007). In light of these concerns, the purpose of this research is to see if the engagement of independent directors can help to reduce earning management in the Vietnamese context. Hence, this study proposes the following:

Hypothesis: *Board independence is significantly and negatively associated with earnings management.*

3. Research methodology

3.1 Data Collection and Research Methodology

3.1.1 Data Collection

Between 2014 and 2020, the study sample, which included Vietnamese Listed Firms, was gathered from the Thomson Reuters Database. Because of the intricacy of their accounting standards, financial institutions (finance, bank, and insurance corporations) were excluded from this study. This research also removed missing numbers and used winsorization to eliminate extreme values. Finally, the study used a sample of 593 businesses with a total of 2,086 observations.

3.1.2 Research Methodology

Because the observed data includes panel data with both spatial and temporal dimensions (593 businesses), the research must first choose a highly acceptable regression strategy (2013-2017). Fixed effect model (FEM) and random effect model (REM) are two common methods for modeling panel data (REM). To evaluate whether model is more appropriate, the research first runs Pooled OLS and FEM regressions using the F test. To determine whether model is better suited, the researchers use Pooled OLS and REM regression based on the Breusch - Pagan test. Finally, the research used the Hausman specification test to identify which of the two analysis techniques, FEM and REM, is the most suited (Hausman, 1978). The fixed effects are used if the Hausman test results reveal that the null hypothesis is rejected; otherwise, the effects are regarded random.

The endogeneity problem could be addressed with a measure of the relationship between earnings manipulation and board. Independence. This could happen if the relationship under investigation is impacted by other factors (which are not comprised in the regression function). In such cases, the residual term captures the effect of the unobserved variable, and it consequently becomes associated with the dependent variable, particularly discretionary accruals, biasing the estimations. As a result, a research strategy must be developed in order to investigate the impact of possible endogenous variables and to ensure that estimation is unbiased and well-organized. The study conducts tests to validate the model's defects, including heteroscedasticity, autocorrelation, and collinearity tests, to confirm that the findings acquired from the regression approach are meant to be analyzed. If the model has any flaws, the study will attempt multivariate regression using other methods. STATA statistical software 13 is used to examine the data.

The following empirical model is used to test the research hypotheses in this study. Earnings manipulation (EM) is represented by the model, which includes discretionary accruals (DA), board independence, and other control variables.

$$DA_{i,t} = \alpha_0 + \alpha_1 BI_{i,t} + \alpha_2 Controls_{i,t} + \varepsilon_{i,t}$$

In order to make measurement of discretionary accruals (DA), first, this study applies a cash-flow method to measure total accruals ($\mathrm{TA_{it}}$) (Hribar and Collins, 2002; Davidson, Goodwin-Stewart and Kent, 2005; Habbash, Sindezingue and Salama, 2013). This approach encompasses subtracting the operating cash flow carried out from statement of cash flows from the amount of net income (before extraordinary items) from the income statement as follow:

$\mathrm{TA_{i,t}}$ = Net income – Cash flow from operation.

Where $\mathrm{TA_{i,t}}$: Total accruals of firm i in year t

Second, the modified Jones model seeks to measure the total discretionary accruals using the following variables, as described by Kothari et al. (2005):

$$\frac{TA_{i,t}}{\mathrm{A_{i,t-1}}} = \alpha_1 \left(\frac{1}{\mathrm{A_{i,t-1}}}\right) + \alpha_2 \left(\frac{\Delta \mathrm{REV_{i,t}} - \Delta \mathrm{REC_{i,t}}}{\mathrm{A_{i,t-1}}}\right) + \alpha_3 \left(\frac{\mathrm{PPE_{i,t}}}{\mathrm{A_{i,t-1}}}\right) + \alpha_4 \mathrm{ROA_{i,t-1}} + \varepsilon_{i,t} \quad (1)$$

Where:

$TA_{i,t}$: Firm i's total discretionary accrual in year t;

$A_{i,t-1}$: Firm i's total assets in year t-1;

$\Delta REV_{i,t}$: Firm i's changes in net revenues in year t;

$\Delta REC_{i,t}$: Change in account receivables from year t-1 to year t;

$PPE_{i,t}$: Net property, plant and equipment scaled by assets;

$ROA_{i,t}$: Return on total assets for firm i in year t;

$\varepsilon_{i,t}$: Residuals for firm i in year t.

Where α_1, α_2, α_3 and α_4 are coefficients estimated from ordinary least squares (OLS) for all firms in our sample at time t.

With the estimation of regression parameters $\alpha_0, \alpha_1, \alpha_2, \alpha_3, \alpha_4$, this study also estimates the non-discretionary accruals (NDA) of the firms.

$$\frac{NDA_{i,t}}{A_{i,t-1}} = \alpha_1 \left(\frac{1}{A_{i,t-1}}\right) + \alpha_2 \left(\frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}}\right) + \alpha_3 \left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) + \alpha_4 ROA_{i,t-1} + \varepsilon_{i,t} \quad (2)$$

According to preceding analyses (Chen, Elder and Hsieh, 2007; Habbash, Sindezingue and Salama, 2013; Mostafa, 2017), having estimated non-discretionary accruals (NDA) form equation (2), firm i's discretionary accruals (DA) value in year t is computed as following equation:

$$DA_{i,t} = TA_{i,t} - NDA_{i,t} \quad (3)$$

At the different point of time, managers have motives to inflate earnings (DA>0) or deflate earnings (DA<0) within the period, thus, DA value can be positive or negative depending on each company.

The independent variables and control variables are measurement as the following:

Table 1: Measurement of independent and control variables

Independent Variables	**Code**	**Measure**
Board independence	BI	Number of independent members scaled by the number of board directors.
Control Variables	**Code**	**Measure**
Board size	BS	Number of members on board.
Board share ownership	BSO	The percentage of shares owned by the directors on the board.
Board financial expertise	BFE	Proportion of finance, accounting or economics experts compared to board members.
Firm size	FS	The natural logarithm of total assets at the end of fiscal year.

4. Research results

Table 2 shows the descriptive statistics for the explanatory variables. Preferred to the descriptive results, the dependent variable, discretionary accruals which is the proxy for earnings management has the mean value of -5.78 and standard deviation of 241.69. According to the analysis of independent variables, the minimum and maximum values of board independence (BI) are 0% and 50% respectively with the mean value of 32.21%. Board size (BS) consists of approximately eight members with a mean (standard deviation) of 8.04 (1.42) and ranges from a minimum of three members to a maximum of 14 members on board. This is literally complied with the criteria of Vietnamese Labor Code compelling that the range of board size is between 5 to 11 members. The mean value of board share ownership (BSO) is 19.56% with the standard deviation of 9.7% and varies from 0.001% to 73.29%. In addition, board financial expertise (BFE) is comprised of approximately one member on board which has the financial background, with the range from 0 to 7 members. The firm size (FS) defined as logarithm of total asset is 8.85 which is smaller than the value of global firm size of 15.58.

Table 2. Descriptive statistics

Variable	Mean	Std. Dev.	Min	Max
DA	-5.78	241.69	-2,139.46	5,223.8
BI (%)	32.21	7.43	0	50
BS	8.04	1.41	3	14
BSO	19.56	9.7	0.001	73.29
FS	8.85	0.66	7.18	11.33

Source: Original Study

This study uses regression analysis to examine the impact of board independence on earnings manipulation as measured by discretionary accruals (DA) after doing a descriptive analysis of the variables. The Hausman test is used in this study to determine whether the fixed effect or random effect estimation model is the best appropriate for data collecting.

The Hausman test suggests that Prob > Chi2 = 0.000, which is less than 0.05, as shown in Table 4.2. (5 percent). As a result, for the study sample, the fixed effect model is preferable.

Table 3. Hausman test

	Coefficients			
	(b) fem	(B) rem	(b-B) Difference	Sqrt(diag(V_b-V_B)) S.E.
BI	-249.8262	-292.225	42.39881	8.573623
BS	122.9552	126.5926	-3.637336	.8312333
BSO	-7.685728	-6.802539	-.8831887	.1635322
BFE	117.845	126.6287	-8.783695	1.083299
FS	16.55322	-3.02259	19.57581	22.99459
	b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg			
Test:	Ho: difference in coefficients not systematic chi2(10) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 168.22 Prob>chi2 = 0.0000			

Source: Original Study

If the data sample is modeled using FEM, the time-invariant endogeneity is also monitored. Because of the various data sample used to perform this research, this study will need to examine heteroscedasticity (Baltagi, 2008). The Modified Wald test for groupwise heteroscedasticity in the residuals of a fixed effect regression model is used to investigate heteroscedasticity (Rilstone, 2002). This result found that the p-value is less than level of significance 0.05 or 5%. It indicates that the variances are not constant, which means that there is a heteroscedasticity problem. The next analysis is to demonstrate the autocorrelation phenomenon in panel data by conducting Wooldridge test. Since p-value is greater than the level of significance 0.05 or 5%, the null hypothesis is accepted. Thus, there is no autocorrelation in the panel data. As shown in Table 4, the result shows that there is no collinearity diagnostics as VIFs of all variables are less than 10 (Gujarati and Porter, 2009).

Table 4. Collinearity diagnostics test

Variable	VIF	SQRT VIF	Tolerance	R-Square

DA	2.75	1.66	0.3633	0.6367
BI	1.96	1.40	0.5091	0.4909
BS	9.33	3.05	0.1072	0.8928
BSO	5.40	2.32	0.1852	0.8148
BFE	2.88	1.70	0.3471	0.6529
FS	1.14	1.07	0.8741	0.1259
Mean VIF	3.46			

Source: Original Study

To avoid the heteroscedasticity problem, this study uses a fixed effect model (FEM) in conjunction with Cluster-Robust estimation after assessing the research model's flaws (White, 1980). Table 5 shows the regression findings of the fixed effect model.

Table 5 Regression result and Cluster-Robust estimation

DA	Coef.	Robust Std. Err.	t	$P > \|t\|$	[95% Conf.	Interval]
BI	-249.8262	54.54613	-4.58	0.000	-356.9536	-142.6987
BS	122.9552	7.858663	15.65	0.000	107.521	138.3895
BSO	-7.685728	1.40299	-5.48	0.000	-10.44117	-4.930284
BFE	117.845	9.045027	13.03	0.000	100.0807	135.6092
FS	16.55322	69.29416	2.59	0.811	64.91759	470.1219
sigma_u	205.68172					
sigma_e	105.4267					
rho	0.79193488	(fraction of variance due to u_i)				

Source: Original Study

The finding in table 5 indicated that board independence will have a negative and significant impacts on earnings manipulation which is in accordance with the previous research (Klein, 2002; Xie, Davidson III, and DaDalt, 2003; Peasnell, Pope, and Young, 2005; Ali and Zhang, 2015). This resulet will highlight the critical role of independent directors on boards in limiting the likelihood of earnings manipulation. It has been suggested that board independence is an effective deterrent to earnings manipulation. The findings of relationships between other control variables and earnings manipulation are in accordance with the prior researches. For instance, board size has a positive & significant impact on manipulating earnings, implying that a larger board will result in more earnings management (Jensen, 1993, Black & Kim, 2012; Cheng, 2008). It is concluded that a multi-member board will lack cohesiveness, and so will be ineffective in monitoring executive activity. Additionally, there is a negative and significant correlation between board share ownership and earnings manipulation. According to the results of other experts, when board directors own a significant amount of stock in a company, they will carefully evaluate their decisions (Booth, Cornett and Tehranian, 2002). The greater the number of shares held by board directors, the better their decision-making will be, as they will want to safeguard and maximize shareholder wealth as well as their own (Jensen and Meckling, 1976). In line with previous research (Metawee, 2013), the study also reveals that board financial expertise is strongly and positively connected to earnings manipulation, implying that the more financial specialists on the board, the higher the level of earnings manipulation. Apart from the significance of other control variables, this study does not discover any significant relationships between earnings manipulation and firm size.

5. Conclusions and suggestions

Due to the significance of the board of directors in corporate governance, it is critical to have a strong need for solid regulatory mechanisms and policies addressing board membership. In emerging markets, such as Vietnam, where minority owners are poorly protected, improving the efficacy of the board is linked to improving the scope of corporate governance and the quality of profitability.

Furthermore, the business requires a larger perspective and detailed analysis for each business in order to more efficiently design the business operation, which must be consistent with industry features, business size, capital structure, and performance.

In this study, currently, board independence can be considered an effective instrument for monitoring managers' earnings management practices. According to the findings, companies with more independent directors had a lower risk of earnings manipulation, which is consistent with previous research (Ali & Zhang, 2015; Klein, 2002; Xie et al., 2003; Ken V Peasnell et al., 2005). To put it another way, this discovery emphasizes the critical importance of independent directors in preventing earnings manipulation. This will be a great implication for policy-makers and shareholders to build a strong corporate governance for the firms in Vietnam. Non-executive or independent directors must not be involved in the day to day operating the business. Instead, they could use their experience and expertise to provide independent advices and objectivity board as a whole. They also perform supervisory role and will review and monitor the executive directors to ensure that they are fulfilling their duties and running the business in the best interests of shareholders. This paper would suggest to the policy-maker that in order to their dependence, independent director should not be reliant on the company for their main source of income. They should often work part-time for the company and can have the specialist role within the organization. Independent directors should sit on the audit committee, remuneration committee and nomination committee. These committees could help to control many factors within the firms such as followings. Audit committee is responsible for reviewing the effectiveness of board risk management processes, evaluate the internal control processes of the firms. The remuneration committee is responsible for making sure that the firms offer the performance-related remuneration package which is sufficient to attract and retain high-quality directors. The nomination is responsible for identifying and approving the appointment of new directors to the board. In summary, independent directors play a very important role in each of these sub-committee and their independence and objectivity could improve the quality and relevance of decisions taken. Many questions have arisen as a result of this study that need to be investigated further. When data is available, the research should be expanded to include worldwide settings. This will provide a comparative understanding of how board features affect earnings management in emerging markets, particularly Vietnam, and developed markets. In order to broaden our understanding of this issue, future study should incorporate various types of earnings management.

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