

Firm-Size, Profitability, Leverage and Earnings Management of Indian Healthcare Companies

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This study examines the relationship between the firm size and earnings management in selected Indian Healthcare firms listed in BSE Healthcare Index. The firm size is measured using natural logarithm of total assets. Here, Discretionary Accruals (DACC) is used as a proxy for earnings management, along with absolute discretionary accruals (abs_DACC) to capture the magnitude of manipulation among Indian healthcare firms. The study uses a combination of descriptive statistics, correlation analysis along with panel data regression methods, including fixed and random-effects regression models with Hausman test (Hausman, J. A., 1978) to choose the appropriate model between them. The Hausman test indicates that the fixed-effects model is more appropriate for estimation.

ANOVA is used to investigate differences in earnings management across firms' various sizes (Large-cap, mid-cap and small-cap firms). The results show that firm size has a significant negative relationship with earnings management (EM), implying that large healthcare enterprises indulge in lower levels of earnings management practices. Profitability indicates a positive association with earnings management. Leverage is found to be insignificant. The ANOVA results indicate that earnings management significantly differs across firm sizes, with small firms demonstrating highest level of earnings manipulation, implying larger firms are governed and scrutinized more closely which discourages opportunistic reporting practices.

Keywords: earnings management, modified jones model, firm size, profitability, leverage, indian healthcare firms

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1. Introduction

Financial reporting works as a vital tool for informing stakeholders about a firm's financial performance. However, due to flexibility in accounting standards, managers enjoy a lot of freedom, which frequently leads to earnings management strategies. Discretionary accruals have the potential to deceive creditors, investors, regulators, and other users of financial statements by concealing the true financial position of the firms. Healy (1985) and DeAngelo (1986) were the first models to measure discretionary accruals, which often serve as a proxy for earnings management. Firm-specific characteristics have a substantial impact on managerial incentives and earnings management opportunities. Firm size has received a lot of attention in the literature. Watts and Zimmerman (1986) put out the political cost theory, which states that "ceteris paribus, the larger the firm, the more likely the manager is to choose accounting procedures that reduces reported earnings" in order to avoid political costs and regulatory scrutiny. Larger corporations are typically closely monitored by regulators, analysts, institutional investors, and the media, which deters opportunistic reporting.

Profitability, which is typically measured by ROA, is another crucial component. Highly lucrative businesses may employ income-smoothing or upward earnings manipulations to preserve investor confidence and managerial compensation, while less successful businesses may resort to "big bath accounting" during downturns. In order to avoid violations or secure favorable financing terms, managers may be encouraged to fabricate results due to the pressure and scrutiny that leverage generates from creditors over debt covenants. The healthcare industry grew significantly between 2014 and 2025 as a result of increased private investment, government initiatives like Ayushman Bharat, growing health insurance coverage, and increased demand for healthcare services. In India, healthcare spending has also increased dramatically as a result of favorable government policies and changing population expectations. As a result, researching earnings management strategies has become crucial in the Indian healthcare industry.

There are differences in the healthcare sector. Big businesses like Fortis Healthcare and Apollo Hospitals follow ongoing regulatory frameworks and operate under stringent compliance.

However, compared to large-cap companies, smaller and mid-cap companies are subject to less regulation. Because healthcare is one of the pillars of our economy and contributes to the Visit Bharat 2047 vision, greater attention should be paid to achieving sustainable economic growth in our nation. Compared to the industrial and banking industries, there is still a dearth of concentrated research on the firm-specific factors driving profits management techniques in the Indian healthcare sector, despite the industry's enormous economic and social significance.

2. Literature Review

The association between firm size and earnings management has attracted significant attention in the accounting literature, yet empirical evidence remains inconclusive. A substantial body of research indicates that larger firms are less inclined to earnings management practices as they tend to possess more advanced internal control systems, stronger corporate governance practices, greater market visibility, and subject to increased scrutiny from regulators, financial analysts, and institutional investors. This argument aligns with the political cost hypothesis advanced by Watts and Zimmerman (1986) which argues that larger and more visible companies face higher political costs and therefore has greater avenues and incentives to reduce reported earnings.

Some research studies support the fact that larger firms are less likely to manipulate their earnings. Kurniawati (2020) found that in Indian Banking Companies exists a strong inverse negative relationship between firm size and discretionary accruals. It showed that larger banks were less involved in profits management since they had superior control systems and were under constant Big 4 audit scrutiny. The other investigations, however, had the opposite findings. For example, Githaiga et al. (2022) found a positive considerable association between firm size and EM, suggesting that larger and more visible businesses alter results more frequently because of their complex operations, which make it easier to hide accounting changes. Highly indebted companies were more likely to use profits management tactics, according to Sara W. Bassiouny's (2016) analysis of 50 companies listed on the Egyptian Stock Exchange.

On the other hand, other research indicates that larger businesses are more likely to manipulate earnings because their management are under a lot of pressure to satisfy investors and financial analysts, sustain stock prices, and demonstrate consistent performance. Managers may utilize various accounting strategies to falsify reported earnings as a result of this pressure. Because of this, some research indicates that firm size and earnings management are positively correlated, while other research indicates the opposite. These conflicting findings imply that the link is very context-dependent, changing depending on the business climate, industry, and nation. To comprehend this dynamic interaction in a focused environment, sector-specific studies are crucial.

Earnings management is said to be significantly influenced by profitability, which is commonly assessed by Return on Assets, or ROA. According to earlier studies, extremely successful businesses frequently use income smoothing to maintain steady and regular earnings each year in order to draw in investors and stakeholders with their continuous performance. In order to improve future performance, managers of lesser-profitability companies may employ "big bath" accounting, in which they declare even lower profits or greater losses in the present year. Gregory S. Miller (2002) looked at the discretionary disclosure and financial performance of 3,071 corporations and found a strong positive correlation between profitability and the kinds of voluntary disclosures that companies made. Accordingly, Shoaib, A., & Siddiqui, M. A. (2022) found that highly profitable companies frequently use earnings manipulation to sustain their growth trend, project a favorable image, and affect market expectations.

The literature has also extensively studied leverage, with conflicting empirical results. According to Gunawan et al. (2015), management may immediately turn to earnings management techniques when a company faces liquidation. Financial leverage has a considerable impact on accrual-based earnings manipulation among listed French companies, according to Lazzem and Jilani (2018). This suggests that highly leverage firms may engage in more earnings manipulation to avoid debt covenant violations. Higher leverage may constrain management, according to some research.

On the other hand, some research indicates that highly leveraged firms use upward earnings manipulation to keep a positive financial image and avoid violating debt covenants. Financial leverage, which indicates how much a business depends on debt funding, is defined by Purnama (2017) as the ratio of total debts to total assets. According to Satpura (2018), leverage is a crucial measure of a company's reliance on debt financing and has a big influence on earnings management.

The healthcare industry has received little attention, particularly in developing nations like India, despite the fact that numerous studies have looked at these firm-specific characteristics. Ayushman Bharat and other government programs, as well as increased private investment and health insurance coverage, have all contributed to the recent rapid growth of the Indian healthcare sector. At the same time, this industry faces a number of difficulties, such as regulatory uncertainty, particularly for Indian pharmaceutical and healthcare firms, which are heavily impacted by shifting laws pertaining to insurance plans, hospital policies, drug prices, and quality standards. For instance, National Pharmaceutical Pricing Authority mandates can quickly erode pharmaceutical firms profit margins. Similarly, hospital reimbursement rates and patient inflows may be impacted by changes to Ayushman Bharat regulations. Depending on the size of the company, these characteristics may have various effects on earnings management incentives.

The majority of earlier studies conducted in the Indian context either relied on large cross-sectional samples or concentrated on industries like banking and manufacturing. The healthcare industry is the subject of very few research, and those that do tend to ignore market capitalization groups (such as large, mid, and small-cap). This study examines how business size, profitability, and leverage affect earnings management in the Indian healthcare industry in an effort to close this gap. This study attempts to provide deeper and more sector-specific insights into the factors that influence earnings manipulation in this crucial healthcare sector by using panel regression approaches and comparative group analyses.

3. Objectives of the Study

The study aims to fulfil the below objectives:

- To analyze how differences in firm size influence earnings management.
- To assess how profitability impacts earnings management behavior.
- To examine the relationship between leverage and earnings management.
- To compare earnings management practices across firm-size categories.

4. Hypothesis Development

H1: Firm Size significantly influences the level of earnings management in Indian healthcare firms.

H2: Profitability exerts a significant effect on earnings management practices.

H3: Leverage significantly impacts earnings management behavior.

H4: Earnings management practices differ significantly across large-cap, mid-cap and small-cap firms in Indian healthcare sector.

5. Methodology

- **Sample Selection:** The present study investigates earnings management practices among 50 Indian healthcare companies listed in BSE Healthcare Index over the period from 2014 to 2025. To guarantee representation across all firm sizes, the chosen companies were separated into large, mid, and small-cap groups based on market capitalization. The first year of data for each firm was dropped to calculate lagged total assets in the Modified Jones Model. So, the final dataset consists of 550 firm-year observations to analyze the evolving earnings management practices of Indian healthcare firms across diverse market conditions and regulatory environments.
- **Data Collection and Sources:** The study is based on secondary data obtained from the companies' annual reports and published financial statements and CMIE Prowess database.
- **Measurement of Variables:** The study uses discretionary accruals (DACC) to examine the direction of earnings manipulation in Indian healthcare companies. To evaluate the magnitude of EM, the study uses the absolute of discretionary accruals (abs_ DACC).

Descriptive statistics are conducted using both the metrics but the regression models rely on (abs_ DACC) to capture the overall extent of earnings management.

Furthermore, the study investigates the impact of firm-specific factors on earnings management. The following independent variables are measured as below:

Firm Size (Size): Log of total assets

Profitability (ROA): The ratio of net profit to total assets

Leverage (LEV): The ratio of total borrowings to total assets.

■ Estimation of Discretionary Accruals, DACC (Earnings Management)

To detect earnings management, this study employs the Cash Flow Approach of the Modified Jones Model, 1995 as it isolates discretionary accruals from non-discretionary accruals by controlling for the firms' normal business operations.

The total accrual (TACC) is measured as:

$$TACC_{it} = Net\ Income_{it} - Operating\ Cash\ Flows_{it}$$

Following the Modified Jones Model, Dechow, Sloan, and Sweeney's (1995), Total accruals were subsequently split into non-discretionary accruals (NDA) and (DACC). (Kothari et al., 2005; Teoh et al., 1998):

$$\frac{TACC_{it}}{TA_{it-1}} = \alpha_1 \left(\frac{1}{TA_{it-1}} \right) + \alpha_2 \left(\frac{\Delta REV_{it} - \Delta REC_{it}}{TA_{it-1}} \right) + \alpha_3 \left(\frac{PPE_{it}}{TA_{it-1}} \right) + \epsilon_{it}$$

here,

$TACC_{it}$ represent total accruals for firm 'i' in year 't'

TA_{it-1} represent total assets for firm 'i' at the end of year 't-1'

ΔREV_{it} represent change in revenue for firm 'i' between years 't-1' and 't'

ΔREC_{it} represent change in receivables for firm 'i' between years 't-1' and 't'

PPE_{it} represent gross property, plant and equipment for firm 'i' in year 't'

$\alpha_1, \alpha_2, \alpha_3$ represents firm-specific parameters

These firm-specific parameters are derived from the estimates using the Modified Jones Model during the sample period.

ϵ_{it} represents error term

In the next stage, a regression is estimated with $TACC_{it}$ normalized by lagged total assets

$\left(\frac{TACC_{it}}{TA_{it-1}} \right)$ as the dependent variable and the following independent variables: $\left(\frac{1}{TA_{it-1}} \right)$,

$\left(\frac{\Delta REV_{it} - \Delta REC_{it}}{TA_{it-1}} \right)$, $\left(\frac{PPE_{it}}{TA_{it-1}} \right)$. Since each variable is scaled by lagged total assets, the standardized

regression coefficients are obtained. These estimated coefficients ($\alpha_1, \alpha_2, \alpha_3$) are then used to estimate the normal or non-discretionary accruals.

NDA are subsequently calculated by multiplying these observed values of the explanatory variables by their estimated coefficients as follow:

$$NDA = \left[\alpha_1 \left(\frac{1}{TA_{it-1}} \right) + \alpha_2 \left(\frac{\Delta REV_{it} - \Delta REC_{it}}{TA_{it-1}} \right) + \alpha_3 \left(\frac{PPE_{it}}{TA_{it-1}} \right) \right]$$

In the next stage, DACC are computed as the difference between the total assets and non-discretionary Accruals:

$$DACC = \frac{TACC_{it}}{TA_{it-1}} - NDA$$

A positive value of DACC signifies income-increasing management whereas a negative value of DACC reflects income-decreasing strategies.

- **Statistical Tools and Techniques:** The study utilizes several statistical tools and techniques for empirical analysis, including descriptive statistics, correlation analysis, one-way ANOVA,

and panel data regression. Descriptive statistics were employed followed by Correlation analysis to explore the relationship between firm-specific attributes and earnings management. Furthermore, panel regression models are estimated using both fixed and random effects specifications to ascertain the influence of firm size, profitability, and leverage on earnings management; the Hausman test (Hausman, 1978) is used to select between fixed and random effects specifications. Stata software is used for all computations and analysis.

6. Analysis and Discussion

Descriptive Statistics

Table 1: Descriptive Statistics

variable	mean	p50	sd	min	max	N
DACC	.0083471	-.0007079	.1021991	-.3126141	1.134831	550
abs_DACC	.05985	.0407483	.083222	0.002269	1.134831	550
SIZE	7.762365	7.740951	1.368037	4.089164	10.74364	550
ROA	.0886662	.0776574	.0929292	-.1724377	1.204694	550
LEV	.1632376	.1440444	.1447737	-.24	.72	550

Source: Author's Own Calculations

Here, abs_DACC quantifies the extent of earnings manipulation and DACC indicates its direction. The mean DACC of 0.0083 implies modest income-increasing tendencies among healthcare firms, whereas the higher mean abs_DACC of 0.0599 (approximately 6 %) implies that healthcare firms manipulate their earnings by approximately 6 % of their total assets.

The above result exhibits considerable variation in Firm size, (mean value= 7.76, S.D =1.37) confirming both small and large firms are present in the sample. Profitability (ROA) mean stands at 8.87% and leverage (LEV) at 16.32%. The wide variation in ROA and earnings management clearly shows the heterogeneous nature of Indian healthcare industry.

Correlation Analysis

Table 2 displays the Pearson Correlation coefficients among the key variables.

Table 2: Correlation Statistics

VARIABLES	DACC	abs_DACC	SIZE	ROA	LEV
DACC	1.0000				
abs_DACC	0.5777 0.0000	1.0000			
SIZE	0.0756 0.0765	-0.1181 0.0056	1.0000		
ROA	0.4177 0.0000	0.4033 0.0000	-0.0108 0.8002	1.0000	
LEV	-0.1250 0.0033	0.0187 0.6617	-0.2169 0.0000	-0.2511 0.0000	1.0000

Source: Author's Own Calculations

Here, firm size (Size) demonstrates significant negative relationship with abs_DACC ($r = -0.1181$, $p < 0.01$), implying that larger firms indulge less in earnings manipulation. Profitability (ROA) exhibits statistically significant positive relationship with abs_DACC ($r = 0.4033$, $p < 0.01$), suggesting more profitable Indian healthcare firms possess stronger incentives to manipulate reported earnings, indulging in income smoothing to maintain performance expectations. (LEV) displays weak and insignificant relationship with abs_DACC ($r = 0.0187$). Importantly, among all the independent variables, there is absence of high correlation which indicates that multicollinearity is not a concern in the regression analysis.

Comparative Analysis of Earnings Management by Firm Size

A one-way ANOVA was conducted to large-cap, mid-cap and small cap Indian healthcare firms to determine if earnings management practices differ among them.

Table 3: Mean Comparison by the Firm's Size Group

Size_group	mean	sd	N
Large	.0470693	.0425228	176
Medium	.0594343	.0797529	187
Small	.0722947	.1098652	187
Total	.05985	.083222	550

Source: Author's Own Calculations

ANOVA Results

Table 4: ANOVA

SOURCE	SS	df	MS	F	Prob > F
Between groups	.057741937	2	.028870968	4.22	0.0152
	3.7445798	547	.006845667		
Within groups	3.80232174	549	.006925905		

Source: Author's Own Calculations

The ANOVA results indicate statistically significant differences in earnings management practices across all the firm sizes ($F = 4.22$, $p = 0.0152$). Small-cap firms show the most manipulation (mean = 0.0723), followed by mid-cap firms (mean = 0.0594) whereas large-cap firms show the least manipulation (mean = 0.0471). This supports the political cost and monitoring hypotheses, indicating that stronger scrutiny limits opportunistic reporting behavior (Ali et al., 2015; Githaiga, 2022).

Panel Regression Analysis

To examine the firm-specific determinants of earnings management, both fixed-effects and random-effects panel data regression models were estimated, while controlling for unobserved heterogeneity over time and across firms.

Table 5: Random Effects Regression Results

Random-effects GLS regression		Number of obs	=	550
Group variable: FirmID		Number of groups	=	50
R-sq:		Obs per group:		
within	= 0.2856	min	=	11
between	= 0.0000	avg	=	11.0
overall	= 0.1855	max	=	11
corr(u_i, X) = 0 (assumed)		Wald chi2(3)	=	159.31
		Prob > chi2	=	0.0000

abs_DACC	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
SIZE	-.0065774	.0029765	-2.21	0.027	-.0124111 -.0007436
ROA	.4392655	.03571	12.30	0.000	.3692752 .5092558
LEV	.0592748	.0263534	2.25	0.024	.0076231 .1109265
_cons	.062282	.0251598	2.48	0.013	.0129696 .1115944
sigma_u	.02032728				
sigma_e	.06906391				
rho	.07972153	(fraction of variance due to u_i)			

Source: Author's Own Calculations

Overall, the above model predicts earnings management ($\text{Wald } \chi^2 = 159.31$, $p < 0.001$) highlighting that Size is negatively correlated with earnings management ($\beta = -0.0066$, $p = 0.027$), demonstrating larger and visible companies engage less in earnings manipulation. Earnings management is positively influenced by Profitability (ROA) with $\beta = 0.4393$, $p < 0.001$, indicating highly profitable firm manipulate earnings aggressively (Degeorge, F., Patel, J., & Zeckhauser, R., 1999). Similarly, earnings management is positively influenced by LEV with $\beta = 0.0593$, $p = 0.024$, indicating firms with higher debt pressure manipulate their earnings to satisfy debt covenants (Hoang and Phung, 2019). Although the random-effects model provides valuable insights, it's imperative to test its validity by employing Hausman specification test (Hausman, 1978). Therefore, estimation of fixed-effects model is conducted to compare between the two to determine the final approach.

Table 6: Fixed Effect Regression Results

Fixed-effects (within) regression		Number of obs	=	550
Group variable: FirmID		Number of groups	=	50
R-sq:		Obs per group:		
within	= 0.2891	min	=	11
between	= 0.0053	avg	=	11.0
overall	= 0.1772	max	=	11
corr(u_i, Xb) = -0.4153		F(3, 497)	=	67.38
		Prob > F	=	0.0000

abs_DACC	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
SIZE	-.0151601	.0057953	-2.62	0.009	-.0265465 -.0037737
ROA	.5162342	.0370283	13.94	0.000	.443483 .5889854
LEV	.0331443	.0344008	0.96	0.336	-.0344446 .1007332
_cons	.1263457	.046297	2.73	0.007	.0353838 .2173076
sigma_u	.04122431				
sigma_e	.06906391				
rho	.26269489	(fraction of variance due to u_i)			

Source: Author's Own Calculations

The above analysis indicates that (SIZE) has a significant negative effect on earnings management ($\beta = -0.0152$, $p < 0.01$), backed up with the theory that larger firms have better monitoring mechanism to deter accrual manipulation (Jensen & Meckling, 1976; Watts & Zimmerman, 1986). Conversely, as profitability increases, so does earnings management ($\beta = 0.5162$, $p < 0.01$), implying that highly profitable enterprises engage in earnings manipulation to protect their market standing. Leverage show no significant impact ($\beta = 0.0331$, $p = 0.336$). These findings differ from the random-effects results making it important to select the appropriate model which necessitates the need for the application of the Hausman test.

Hausman Specification Test

This test was performed to determine whether the fixed or the random-effects models yields consistent results, checking whether firm-specific factors correlate with the explanatory variables by testing the null hypothesis.

Table 7: Hausman Test Results

Variables	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) fe	(B) re		
SIZE	-.0151601	-.0065774	-.0085828	.0049726
ROA	.5162342	.4392655	.0769687	.0097923
LEV	.0331443	.0592748	-.0261305	.0221114
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(3) = (b-B)'[(V_b-V_B)^(-1)](b-B)				
= 67.34				
Prob>chi2 = 0.0000				

The Hausman test rejected the null hypothesis ($\chi^2 = 67.34$, $p < 0.001$), indicating that the random-effects estimator is inconsistent. Therefore, all final inferences and hypothesis testing are based on these fixed-effects results.

7. Findings of the Study

The size of absolute discretionary accruals (abs_DACC) of 0.0599 (5.99% of total assets) points to significant earnings management among Indian healthcare firms that proves managers actively adjusts accruals to manipulate reported earnings, even though the average signed DACC for the overall sample balance out near zero (0.0083). Such findings align with prior studies on Indian listed firms, Goel, S. (2018) show average (abs_DACC) between 3% and 6% of total assets, reflecting managerial discretion in financial reporting to achieve their own objectives. The fixed-effect regression result indicates a statistically significant negative relationship between firm size and earnings management. Correlation analysis and ANOVA results further confirm their negative relationship, thus supporting H1. These findings validate the Political Cost Theory (Watts & Zimmerman, 1986) that indicates larger firms tends to engage less in earnings manipulation due to intense scrutiny faced by them. These findings are also consistent with prior empirical evidence (Kurniawati, A., & Panggabean, R. R. (2020). Becker et al. (1998), Peasnell et al. (2005) regarding the effectiveness of enhanced governance and strict monitoring in larger organizations. In the context of Indian healthcare firms, larger companies are often monitored by institutional investors, credit rating agencies and financial analysts, thereby curbing the scope for earnings manipulation.

Profitability (ROA) demonstrates a strong positive and highly significant association with earnings management, which is also evidenced by correlation analysis. Therefore, these results provide empirical support for H2, confirming that profitability influence earnings management. The outcome aligns with prior studies (Miller, 2002; Kothari et al., 2005; Gunny, 2010; Bassiouny, S. W. (2016); Alhadab et al., 2020), which noted that profitable firms often manipulate earnings to preserve their growth trends to fulfill investors' expectations, steady their financial results and protect managerial reputation. Indian healthcare firms are under pressure to meet investor expectations as these are considered as growth-oriented businesses so managers are likely to inflate reported earnings.

Leverage exhibits no significant relationship with earnings management under the fixed-effects model and this is also confirmed by the correlation analysis ($r = 0.0187$).

Consequently, H3 is rejected which proposed a significant effect on earnings management. This finding contradicts the Debt Covenant Hypothesis (Watts & Zimmerman, 1986) which believes that highly-leveraged firms indulge in earnings manipulation to avoid breaching debt covenant violations. However, it is consistent with studies by Garcia-Teruel et al. (2014) and Alzoubi (2016) that report weak or insignificant leverage effects within specific institutional settings. It is likely that many Indian healthcare firms mitigate external debt and depend on internal financing, retained earnings, promoter funding, strategic equity, which reduces strict scrutiny associated with debt.

The ANOVA test reveals statistically significant differences in earnings management across firm size categories ($F = 4.22$, $P = 0.0152$). Small-cap firms demonstrate the highest levels of earnings management, while the large cap firms show the lowest level of earnings manipulation, leading us to accept H4. Larger firms benefit from strong compliance and closer scrutiny which constrain them to influence reported earnings (Mangla and Dhanda (2022). These findings are also ably backed up by Burgstahler and Dichev (1997), Ajit et al. (2013), and Habib et al. (2013) that documented smaller firms are more subject to earnings manipulation due to weak corporate governance, limited coverage by financial analyst and reduced monitoring.

8. Practical Implications and Future Research Scope

This study offers several important practical implications for regulators, investors, auditors and everyone involved in the Indian healthcare sector. The evidence that larger healthcare companies engage in lower levels of earnings manipulation emphasizes the necessity of robust monitoring mechanisms, stronger corporate governance and transparent reporting. Regulators and policymakers should enhance disclosure mandates, especially for small-cap healthcare firms as they are more vulnerable to earnings manipulation. Investors are advised to approach highly profitable firms with greater caution as profitability was found to be positively associated with aggressive earnings management. Finally, auditors and board members should pay close attention on earnings quality as it might affect the true reliability of reported earnings driven by management's accounting choices.

Future studies may incorporate additional firm-specific factors like board independence, audit quality, ESG performance, institutional ownership, ownership structure to provide a more comprehensive understanding of earnings management behavior. Future research may also involve investigating real earnings management practices to capture alternative forms of managerial discretion. Furthermore, given the rapid shift of the Indian healthcare sector following the post-pandemic, future research may investigate how digital transformation, R&D, and specific healthcare sub-sectors such as pharmaceuticals, hospitals and diagnostics impact financial reporting quality.

9. Conclusion

Indian healthcare and pharmaceutical sector operate in a dynamic environment that faces tight price controls on essential medicines, very strict regulations, reimbursement uncertainties particularly in case of healthcare service providers, and increasing compliance requirements. These regulatory pressures can impact profitability and influence managers to manipulate earnings in order to maintain stable financial performance of their companies. As Indian healthcare companies are undergoing continuous expansion and technological development through innovation, research and development and growing market participation, maintaining the integrity of financial statements will be essential for fostering investor confidence and corporate accountability and promoting long-term industry sustainability. Overall, this study contributes to India's Viksit Bharat @2047 vision which focuses on sustainable economic growth, strong corporate governance and responsible reporting practices, thereby ensuring robust healthcare system in our country.

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