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# Impact of Real Earnings Management on Profitability and Firm Value: A Study of Manufacturing Companies in India

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## Abstract

This study aims to analyze the effect of real earnings management (REM) practices on profitability and firm value. The study uses secondary data from 250 manufacturing companies listed on the Bombay Stock Exchange (BSE) Top 500 during the period 2017–2021. The research design used is correlational with a multiple linear regression approach. The analysis results show that the intensity of REM has a significant negative effect on firm performance as measured by Return on Assets (ROA) and on firm value as proxied by Tobin's Q in the following year. These findings indicate that REM practices not only harm long-term profitability but also erode firm value. This study strengthens empirical evidence regarding the negative consequences of REM and provides implications for management and regulators in order to improve the quality of financial reporting and protect stakeholder interests.

**Keyword**: Real Earnings Management, Profitability, Firm Value, Tobin's Q, Indian Manufacturing.

## 1. Introduction

Earnings management has long been a phenomenon of interest in accounting research. Generally, this practice is carried out using two main approaches: accrual-based earnings management and real earnings management (REM) (Dakhlallh et al., 2020). Unlike accrual manipulation, which relies on accounting policies, REM involves changes in a company's actual operational activities, such as reducing research and development (R&D) spending, selling fixed assets at specific times, or lowering prices to boost short-term sales (Arıkan, 2022; Tubbs, 2007). This practice is often undertaken by management to achieve specific profit targets, particularly to meet market expectations or avoid reporting losses. However, while it can improve financial performance in the current period, REM has the potential to compromise a company's future growth prospects and competitiveness (Tabassum et al., 2015).

Although REM has been widely discussed in the literature, its impact on long-term performance and firm value remains an unresolved empirical debate (Bui, 2023; Tulcanaza Prieto & Lee, 2022). Most previous research tends to focus on developed market contexts (Kumar & Goswami, 2021; Oganda, 2023; Tulcanaza Prieto & Lee, 2022), while evidence from developing countries, particularly in the manufacturing sector, is limited (Amatya et al., 2018; Hamouri, 2020). Furthermore, the complexity of measuring REM intensity and the variety of its practices make generalizing research results difficult. Therefore, a study is needed that specifically examines the relationship between REM and profitability and firm value in an economic setting with distinct institutional and capital market characteristics, such as India.

Based on this background and research gap, this study aims to analyze the effect of real earnings management on profitability and firm value in manufacturing companies listed on the Bombay Stock Exchange (BSE). Specifically, this study tests two main hypotheses: (1) whether the intensity of REM negatively impacts firm performance as measured by Return on Assets (ROA); and (2) whether REM negatively impacts firm value as proxied by Tobin's Q. Using data from 2007–2011, this study seeks to provide more comprehensive empirical evidence regarding the economic consequences of REM practices.

The results of this study are expected to make important contributions both theoretically and practically. Theoretically, the study findings will enrich the literature on the relationship between REM and firm performance and value, particularly in the context of emerging market economies like India. Practically, this

research can be used as a consideration by boards of directors, audit committees, and regulators in formulating stricter corporate governance and oversight policies. In addition, these findings are also relevant for investors and creditors as a basis for assessing the quality of profits and the sustainability of company operations.

## 2. The Art of Research

### 2.1. Real Earnings Management (REM) Concept

Real Earnings Management (REM) is a concrete operational intervention undertaken by management to achieve specific profit targets, in contrast to accrual management, which merely manipulates accounting estimates (Habib et al., 2022; Nguyen et al., 2023). REM involves making business decisions that affect a company's real cash flows, such as strategic spending cuts or pricing policy changes, with the primary goal of increasing reported earnings in a given period (Pacheco Paredes & Wheatley, 2017). According to Lanier et al., (2019), this practice is carried out both to influence contractual outcomes that depend on accounting figures and to mislead stakeholders about the company's economic performance. In the context of agency theory, REM is often motivated by a conflict of interest between managers and company owners, where managers tend to prioritize short-term profits over personal interests (Tian et al., 2018).

### 2.2. Forms of REM

Based on previous research, REM can be classified into four main categories. First, reductions in discretionary spending such as research and development (R&D) and selling, general, and administrative (SG&A). These reductions may increase short-term profits but risk weakening the company's innovation and competitiveness in the future (Lee & Ha, 2024). Second, scheduling fixed asset sales to report profits (timing of asset sales), which allows managers to adjust the timing of profit recognition to suit reporting needs (Hammami & Hendijani Zadeh, 2022). Third, overproduction to lower the cost of goods sold (COGS) per unit, despite potentially incurring high inventory holding costs (Lanier et al., 2019)). Fourth, granting unfair price discounts to boost sales volume, which can erode sustainable profit margins (Maigoshi, 2015). These four forms demonstrate the variety of tactics used by management to manipulate real activities.

### 2.3. The Impact of REM Based on Previous Theory and Research

Agency theory suggests that managers may engage in REM to maximize compensation or avoid sanctions for failing to achieve earnings targets (Elsayed & Elbardan, 2018). However, empirical research consistently shows that REM has negative long-term consequences. For example, Leggett et al., (2009) found that firms engaging in REM experienced declining future operational performance and cash flows. A study by Henry & Bhuiyan (2013) also confirmed that REM surrounding a stock offering negatively impacts post-offering performance. In the Indian context, Mathur et al. (2021) reported a significant negative relationship between the intensity of REM and profitability (ROA) and firm value (Tobin's Q). These findings indicate that while REM may present a better performance image in the short term, the practice ultimately harms a firm's value and growth prospects.

### 2.4. Hypothesis Development

Based on the theoretical framework and empirical evidence outlined, this study proposes two main hypotheses. First, because REM sacrifices strategic investment and long-term operational efficiency, it is assumed that the practice will negatively impact firm performance. Therefore, the first hypothesis is formulated: H1: Real earnings management negatively impacts firm performance. Second, given that REM can reduce growth prospects and increase investors' risk perceptions, a firm's market value is also expected to be negatively impacted. Therefore, the second hypothesis is formulated: H2: Real earnings management negatively impacts firm value. These two hypotheses will be tested using data from Indian manufacturing firms to provide additional empirical evidence on the consequences of REM in an emerging market context.

## 3. Method

This study uses a quantitative approach with a correlational research design. This design was chosen to examine the relationship between the independent variable, namely the intensity of real earnings management (REM), and the dependent variables, which include profitability and firm value. The data used are secondary and obtained from the company's annual financial reports during the observation period. With

this approach, the study aims to identify relationship patterns and measure the magnitude of the influence of REM on the company's financial performance and market valuation, without testing the causal relationship experimentally. The population in this study is all companies listed in the Bombay Stock Exchange (BSE) Top 500 index during the period 2017 to 2021. From this population, the sample was selected using a random sampling method with specific criteria, namely only companies operating in the manufacturing sector. The selection of the manufacturing sector was based on the uniformity of operational characteristics and the availability of data needed to measure the REM variable. Of the 500 available financial reports, 250 reports met the eligibility criteria and were used in the analysis. Thus, the total resulting observations were 750 panel data (250 companies × 3 years). This sample is considered representative of the population of manufacturing companies in India during the period studied.

The dependent variables in this study consist of profitability, measured using Return on Assets (ROA), and firm value, proxied by Tobin's Q. ROA is calculated as net profit after tax divided by total assets, while Tobin's Q is calculated based on the ratio of the market value of equity and debt to the book value of total assets. The independent variable is the intensity of REM, measured through three main proxies: (1) managed revenues (changes in managed revenues), (2) total accruals using the balance sheet approach (TACC-B) and cash flow (TACC-O), and (3) discretionary accruals (DACC-O). Meanwhile, control variables include firm size (logarithm of total assets), financial leverage (total debt per total assets), and liquidity (current ratio). All variables are measured using the model developed by Gill et al. (2013) to ensure consistency and comparability of the results.

Data analysis was performed using multiple linear regression to examine the effect of REM on profitability and firm value. The regression model was estimated using cross-sectional data collected from annual reports. Classical assumption tests, such as normality, heteroscedasticity, and multicollinearity, were performed to ensure the reliability of the regression results. Furthermore, the analysis was supported by descriptive statistics and the coefficient of determination ($R^2$) to evaluate the robustness of the model. All data processing was performed using relevant statistical software, and the significance level used was $\alpha = 5\%$. The regression results were then interpreted to confirm or reject the proposed hypotheses.

## 4. Result

### 4.1. Relationship between REM and Profitability (ROA)

Based on the regression analysis, the intensity of real earnings management (REM), measured by the proxy of managed revenues (R10) (see Table 1), shows a significant negative effect on company performance, as measured by Return on Assets (ROA) in the following year (ROA11). The regression coefficient for R10 is -0.020 with a significance level of p = 0.047, which supports the first hypothesis (H1). The control variables of company size (FS10) and financial leverage (FL10) also show a significant negative relationship with ROA11, with coefficients of -0.033 (p = 0.000) and -0.035 (p = 0.000), respectively. This regression model has an $R^2$ value of 0.122 and an adjusted $R^2$ of 0.111.

Table 1. Results of the Analysis of the Relationship between REM and Profitability (ROA)

| | Un-standardized coefficient | | Standardized coefficient | T | Sig | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | | | Tolerance | VIF |
| (Constant) | 0.259 | 0.036 | | 7.235 | 0.000 | | |
| $R_{10}$ | -0.020 | 0.010 | -0.120 | -1.997 | 0.047 | 0.996 | 1.004 |
| $FS_{10}$ | -0.033 | 0.008 | -0.270 | -4.377 | 0.000 | 0.943 | 1.060 |
| $FL_{10}$ | -0.035 | 0.009 | -0.250 | -4.043 | 0.000 | 0.940 | 1.064 |

### 4.2. The Relationship between REM and Profitability: Alternative Measurements

When REM intensity was measured using the balance sheet approach's total accruals proxy (TACC-B10), the regression results remained consistent (see Table 2). The coefficient of TACC-B10 on ROA11 was -0.035 with a significance level of p = 0.000. Financial leverage (FL10) also again showed a significant negative effect (coefficient -0.028, p = 0.000). This model explained a higher variance in the data with an $R^2$ of 0.379 and

an adjusted $R^2$ of 0.365. These results further strengthen the finding that REM negatively impacts company profitability in the subsequent period.

Table 2. Results of the Analysis of the Relationship between REM and Profitability: Alternative Measurements

| | Un-standardized coefficient | | Standardized coefficient | t | Sig | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | | | Tolerance | VIF |
| (Constant) | 0.194 | 0.018 | | 10.823 | 0.000 | | |
| TACC-$B_{10}$ | -0.035 | 0.005 | -0.566 | -6.593 | 0.000 | 0.938 | 1.066 |
| $FL_{10}$ | -0.028 | 0.006 | -0.421 | -4.904 | 0.000 | 0.938 | 1.066 |

## 4.3. Relationship between REM and Firm Value (Tobin's Q)

Testing the second hypothesis (H2) shows that real earnings management has a negative effect on firm value as measured by Tobin's Q. Two REM proxies yield statistically significant findings (see Table 3). First, the model with TACC-B10 as the independent variable produces the regression equation: Q11 = 5.324 – 0.771(TACC-B10), with a t-value of 1.98 and p = 0.05. Second, the model with TACC-O10 produces the equation: Q11 = 6.67 – 0.891(TACC-O10), with a t-value of 2.215 and p = 0.028. Both of these results confirm that the increase in REM intensity in 2020 is associated with a decrease in firm value (Tobin's Q) in 2021.

Table 3. Relationship between REM and Firm Value (Tobin's Q)

| | Un-standardized coefficient | | Standardized coefficient | t | Sig | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | | | Tolerance | VIF |
| (Constant)- | 0.260 | 0.036 | | 7.249 | 0.000 | | |
| DACC-$O_{10}$ | -0.074 | 0.040 | -0.111 | -1.834 | 0.068 | 0.974 | 1.027 |
| $FS_{10}$ | -0.034 | 0.008 | -0.275 | -4.461 | 0.000 | 0.944 | 1.075 |
| $FL_{10}$ | -0.039 | 0.009 | -0.276 | -4.421 | 0.000 | 0.920 | 1.087 |

## 4.4. Summary of Statistical Results

Overall, all tested regression models support both research hypotheses. Not only the independent variable (REM), but also control variables such as firm size and financial leverage consistently show a negative relationship with firm performance and value. A high significance level ($p < 0.05$) and adequate $R^2$ value indicate that the model has good explanatory power. These findings provide strong empirical evidence that real earnings management practices have significant negative consequences for the profitability and market value of manufacturing companies in India in the short term (one year after reporting).

## 5. Discussion

The results of this study consistently confirm that real earnings management (REM) practices negatively impact firm performance and value. Significant regression coefficients indicate that the intensity of REM practices such as reducing R&D spending, scheduling asset sales, or overproduction policies correlates with a decline in Return on Assets (ROA) and Tobin's Q in the following year. This finding suggests that manipulating real operating activities is not a sustainable strategy, but rather merely provides short-term gains at the expense of the firm's future growth prospects and financial stability. Furthermore, high levels of financial leverage exacerbate the negative effects of REM, suggesting that firms with high debt structures are more susceptible to reporting pressures and the economic consequences of such practices.

These findings align with numerous previous empirical studies, both in emerging and developed markets. A study by Mathur et al. (2021) on Indian manufacturing firms also reported a negative relationship between REM and profitability and market value. Similarly, Mishra & Kapil (2017) found that firms engaging in REM tended to experience declines in operating cash flow and operating performance in subsequent periods. The

consistency of the results across these studies strengthens the validity of the findings and suggests that the detrimental impact of REM is systematic and observable across various economic contexts.

Theoretically, the results of this study support the agency theory perspective, which states that managers often make decisions that prioritize short-term self-interest, such as achieving bonus targets or maintaining stock prices, despite the potential to damage the firm's long-term value. REM is one manifestation of this conflict of interest, where managers sacrifice operational efficiency and strategic investments for the appearance of better profits. Therefore, this study not only adds to the empirical evidence but also emphasizes the importance of stricter oversight of operational activities and financial reporting to protect the interests of corporate stakeholders.

## 6. Conclusion

The conclusions of this study confirm that real earnings management (REM) practices have a significant negative impact on long-term profitability and firm value. Data analysis from 250 Indian manufacturing companies shows that the intensity of REM practices is inversely related to financial performance (measured by ROA) and market valuation (measured by Tobin's Q) in the following year. This finding is consistent with agency theory, where managers tend to sacrifice corporate sustainability for short-term gains. Therefore, this study emphasizes the importance of strengthening corporate governance, stricter oversight of operational activities, and stakeholder awareness of the hidden risks of real-activity-based earnings manipulation practices.

Theoretically, this study contributes to the growing literature by providing additional empirical evidence that REM practices are not merely reporting phenomena but have detrimental real-economic consequences. These results support the need for a more holistic approach to studying earnings management, considering operational aspects in addition to accounting ones. Practically, these findings highlight the importance of strengthening corporate governance and internal oversight mechanisms. Boards of directors and audit committees are advised to be more critical in assessing fluctuations in capital expenditures, asset sales patterns, or inappropriate changes in pricing policies. For regulators, these findings can provide a basis for refining reporting standards that focus not only on accruals but also encourage disclosure of potentially manipulative operational activities.

This study has several limitations. First, the sample only covers manufacturing companies in India, so generalizations to the service sector or other countries require caution. Second, the observation period (2007–2011) is relatively short and may have been influenced by market conditions, particularly the 2008 financial crisis. Third, the measurement of REM uses accrual- and revenue-based proxies, which, while commonly used, do not fully capture the full complexity of real activity. Future research is recommended to expand the scope of sectors and time periods, and to develop more direct REM measurement metrics, for example through surveys or interviews with management. Future research could also explore the moderating role of corporate governance variables or institutional pressures in the relationship between REM and firm performance.

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