

## REDEFINING REAL-EARNINGS MANAGEMENT: A CONSTRUCTIVE PERSPECTIVE OF A NON-OPPORTUNISTIC STRATEGY

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**Abstract:** *This research investigates the hidden characteristics of real-earnings management (REM) as a competitive strategy, challenging the mainstream view of it as an opportunistic practice. This work employs a dynamic panel data two-step generalised method of moments (GMM). The sample comprises companies listed on the Indonesia Stock Exchange from 2009 to 2024. This paper presents crucial theoretical implications for real-earnings management as an efficient practice that challenges the mainstream view of opportunistic financial reporting. Firstly, the persistence of real-earnings management practice is evidence of a violation of the temporary or abnormal practice. Secondly, the interrelationships among the components form an internal supply chain. Third, the effects of real-earnings management on income sustainability are evident. Finally, the positive influence of the macroeconomic situation on the abnormal operating cash flow arrangement affirms the non-opportunistic nature of the practice. However, this paper also admits that ex post analysis is limited in its ability to characterise current REM. This paper provides a framework for future research to incorporate the still-unexplored potential determinants of each REM criterion, and the urgent need to complement these measurements with a regression residual model is clear.*

**Keywords:** Dynamic Capabilities, Internal Supply Chain, Non-Opportunistic Perspective, Real Earnings Management

### INTRODUCTION

This paper offers an insight into real earnings management as a competitive strategy, a non-opportunistic perspective that challenges the mainstream view of opportunistic practice. [Paredes & Wheatley \(2017\)](#) questioned whether the growing arrangement represents earnings management or just efficient business practice. Addressing this issue is crucial to refining our understanding of what true real-earnings management is.

However, discussions about REM have caused controversy. [Habib et al. \(2022\)](#) explain that REM stands on an opportunistic and

efficient view, which focuses on immediate profit rather than the creation of real economic resources. Accordingly, opportunistic REM lacks the fundamental capabilities for competitive advantage, so it should be incidental. [Vorst \(2016\)](#) found that investment cuts for the operating alteration purpose will revert to normal mode shortly, indicating an incidental rather than a continuous event.

Next, as an opportunistic action, REM will sacrifice the company's real fundamental economics by shifting future sales and cash flow into the current period. [Vorst \(2016\)](#) indicated that expenditure decreases from investment

cuts tend to sacrifice capability sustainability. Tabassum et al. (2015) documented the adverse impact of REM on future performance. Similarly, [Vorst \(2016\)](#) found that reversal of discretionary investment cut post-REM was associated with lower future performance. [Li \(2019\)](#) documented that the negative influence of the discretionary expense strategy on the quality of earnings was more pronounced in the post-SOX period. [Chowdhury and Eliwa \(2021\)](#) reported higher sales and greater manipulation of discretionary expenses for companies audited by Big Four audit firms.

On the contrary, [Bansal et al. \(2021\)](#) found an anomalous relationship between this manipulative activity approach and investors' reactions. Investors believe that downward REM conveys increased risk and vice versa. [Al-Shattarat et al. \(2022\)](#) found that REM is a strong predictor of future performance.

This recent paper argues that debates surrounding REM characteristics first stem from the technical overlap between the abnormal activity representation and the usual competitive strategic measure. [Pappas et al. \(2019\)](#) and [Commerford et al. \(2019\)](#) asserted that detecting REM is challenging. [Gilliam \(2021\)](#) concluded that the traditional REM metrics were mis-specified. [Cohen et al. \(2020\)](#) highlighted that omitting potential determinants of a specific REM measure is a crucial issue.

Secondly, previous investigations focus on total REM, not on its components. Existing discussions tend to treat REM elements as mutually exclusive activities. Therefore, several studies conducted analyses combining these elements ([Aker et al. 2024](#); [Bansal et al. 2021](#)), which implied that abnormal operating cash flow, overproduction, and abnormal discretionary expense were independent of one another. Accordingly, the potential characteristics of the strategy, derived from time-to-time persistence, interrelationships, and individual contributions of REM elements, remain unexplored.

This paper develops a constructive view of REM as a competitive strategy based on the

dynamic capability perspective of resource-based view (RBV). A competitive advantage relies on valuable, rare, inimitable, and non-distributable resources controlled and exploited by an organisation ([Barney et al. 2021](#)). The transformation of potential attributes into effective resources requires a process of mobilisation and integration, an essential capability acquired through long and repetitive organisational learning.

This work performed a triple-stage investigation into REM as a competitive strategy. Firstly, the detection of the across-period persistence of the components of REM. A high endurance indicates consistent exploitation, excluding abnormal, incidental, or unusual events. Continuous activities allow companies to accumulate knowledge and make improvements, an important stage of organisational learning according to RBV.

Secondly, an investigation of the interrelationships among the REM component, a representation of the internal supply chain, and the organisation's exploitation and integration of resources into a competitive strategy. The term REM as an internal supply chain is a new concept that differs from previous research. [Paredes & Wheatley \(2017\)](#) and [Tabassum et al. \(2015\)](#) focus only on the deteriorating (enhancing) future performance in analysing opportunistic (efficient) REM. This paper develops a new terminology based on the hidden REM features that resemble the characteristics of the internal supply chain.

In some ways, the interrelationships among REM elements can reveal how the strategy represents the internal supply chain, a flow of economic resources between multiple functions within the organization. An abnormal operating cash flow strategy is essentially the same as a strengthened sales strategy. Large discounts can yield optimal profits by attracting new and existing customers. However, the strategy requires support from production and supporting functions, including excellent procurement support, tidy production schedules,

facility readiness, and sufficient human resources. Thus, interdependence forms a structured pattern, integrated into an internal supply chain arrangement.

Nonetheless, the terminology of REM as an internal supply chain is confusing. Discussions about REM are among the most prominent topics in financial accounting. On the other hand, internal supply chains have advanced significantly in management accounting. This hybrid view is not new in the accounting literature.

Previous research ([Bentley et al. 2013](#); [Karampinis et al. 2024](#)) has examined managerial accounting topics from a financial accounting perspective. [Bentley et al. \(2013\)](#) developed business strategy metrics using information about business and managerial activities that leave a trail in the financial report. [Karampinis et al. \(2024\)](#) analysed the role of business strategy using metrics of [Bentley et al. \(2013\)](#) to examine earnings quality. [Lee \(2023\)](#) used financial statement data to demonstrate the roles of operations management, R&D capability, and solvency in gross profit. By using ratio and trend analysis, stakeholders can not only analyse investment and funding activities but also support business strategic planning using financial report information ([Barman 2023](#)).

A discussion of REM ([Roychowdhury 2006](#)) can represent the financial accounting view of the operational strategy. On the other hand, the discussion of supply chain and REM practice has been raised by several researchers ([Lanier et al. 2019](#); [Suhanda and Firmansyah 2020](#); [Wang et al. 2023](#)). [Lanier et al. \(2019\)](#) found that supplier engagement is a crucial determinant of REM capability. In comparison, [Suhanda and Firmansyah \(2020\)](#) found that supply chains strengthen the relationship between earnings management and idiosyncratic volatility. Similarly, [Wang et al. \(2023\)](#) demonstrated that a stable relationship with the supplier was an important determinant of REM.

The characteristics of REM as an internal supply chain are also evident from the interdependence among its elements. The linkage can convey embedded information about the transfer and exchange of information, inventory, equipment and all other organisational resources, aiming to facilitate the company's goal, as [Basnet \(2013\)](#) stated that it is the provision of products for customers.

Third, examine the influence of lagged REM on current performance to illustrate the effect of REM on the sustainability of competitive advantage. Competitive strategies have essential characteristics for sustaining advantage ([Barney 1991](#)). REM, as a non-opportunistic strategy, should demonstrate a positive long-term impact on future performance. The firm's core capabilities in REM enable it to sustain its competitive advantage.

In addition to these essential internal characteristics, this study recognises the crucial influence of macroeconomics on the key elements of REM. This recent work follows [Chen et al. \(2020\)](#) and [Duong \(2023\)](#), who contributed to the discussion of REM by extending the analysis to incorporate the GDP indicator as a determinant of a firm's financial reporting practices. By incorporating macroeconomic indicators into the model, this recent work can identify which strategies emerge as key elements of REM. This paper considers that by viewing REM as an internal supply chain, determining the key element, the driver of the others components is crucial. The GDP level will change this crucial component as a form of anticipatory strategy for both favourable and unfavourable conditions. Thus, the influence of external conditions on a single REM element becomes a crucial indicator for identifying that element.

This paper clarifies the discussion of REM's influence on companies' performance. This recent work discovered that REM can also be a non-opportunistic practice, characterised by its persistence, embedded internal supply

chain arrangements, and effects on performance sustainability.

This paper organises the remaining sections as follows. The section "Literature Review and Hypotheses Development" describes the prior research and the logical connections underlying the hypotheses. Next, "Methodology" elaborates on sample selection and data analysis techniques. Next, the "Analysis" explains the test results and their alignment with previous research. The last is the conclusion and theoretical implications.

### **Efficient Real-Earnings Management**

Mainstream discussions of REM have grown from a principal-agency perspective ([Chowdhury and Eliwa 2021](#); [Susanto and Pradipta 2020](#); [Susanty 2022](#); [Vorst 2016](#)), which depicted the practice as an opportunistic strategy in financial reporting. Investigating this practice as an efficient (non-opportunistic) strategy entails an alternative view. RBV provides a theoretical framework for analysing REM as a competitive strategy, opposing the non-persistent (inconsistent), independent, and short-term-oriented practice from the perspective of opportunistic financial reporting. RBV focuses on the sources of organisations' competitive advantage, both external and internal ([Barney 1991](#)). RBV explain that activity as a competitive strategy must be valuable, rare, inimitable, and non-substitutable ([Barney 1991](#); [Barney et al. 2021](#)).

The development of REM as a competitive strategy must take into account the organisational resources' characteristics. [Barney et al. \(2021\)](#) describe the types of resources, including physical, human, financial, and organisational resources, that provide the capability to deliver goods and services to customers. On the other hand, [Jauch and Osborn \(1981\)](#) explained that competitive strategy is the coordinated activities across financial, operational, marketing, and even personnel to achieve financial success. Accordingly, competitive strategy represents an

internal organisational resource arrangement, developed to provide an advantage through the provision of goods and services to customers.

This paper focuses on organisational capital resources, as part of the REM characteristic resembles these criteria. All the REM elements dealt with activities related to providing goods and services to customers. This work characterises REM as a competitive strategy by defining it as a persistent strategy, an internal value chain, and activities with valuable performance-sustaining effects.

### **Routines and competitive strategy**

Routines, as reflected in activity persistence, can indicate organisational dependence on a specific strategy. On the other hand, continuous practice also represents a learning process ([Teece 2019](#)). Time after time, continuous activities can accumulate into organisational knowledge. [Smith et al. \(1996\)](#) developed a model of organisational learning within a resource-based theory, characterised by interactions between resources and time-lagged effects. Learning is the essential source of organisational capability, creating unique, rare, inimitable resources.

Continuous adaptation, improvement, and development are the core dynamic capabilities, the essential strategic resource ([Ellström et al. 2022](#)). It explained that dynamic capabilities emerge from the resource-based view, emphasising the time-to-time process of developing and acquiring competencies and assets. Routines are the essential characteristic of dynamic capabilities, that is, activities or behaviours learned, structured, and repetitive ([Winter 2003](#); [Teece 2023](#)).

### **Internal Supply Chain Integration and Competitive Strategy**

Internal supply chain refers to the internally controlled and coordinated flow of materials and information that enables the supply of goods and services to consumers ([Prakash 2014](#)). Knowledge of internal and

external phenomena is a crucial step in developing competitive advantage ([Barney 1991](#)). The capability of internal activity integration serves as the basis for the development of supplier-customer integration within organisations' operations ([Turkulainen et al. 2017](#); [Flynn et al. 2010](#)).

The interconnection among the activities can imply an internal integration process, a crucial stage in the internal supply chain management. Firm's sales planning relies on the long-term level of manufacturing planning and control systems ([Olhager et al. 2001](#)). Each element cannot stand alone; coordination and integration are crucial for achieving competitive advantage. [Turkulainen et al. \(2017\)](#) argued that without integration, internal activities tend to achieve their individual goals.

### **Competitive Advantage's Sustainability Effects**

Focusing on sustainability is critical for firms ([Laksmi et al. 2024](#); [Kamardi et al. 2025](#)). Resource limitations ([Babakhan et al. 2012](#); [Barney 1991](#)) and uncertainty surrounding the business environment ([Kamardi et al. 2025](#)) can reduce the ability to maintain stable competitiveness. The resource-based view holds that resources are crucial for attaining performance and sustainable competitive advantage ([Barney 1991](#)). [Simarmata et al. \(2024\)](#) found that developing valuable, rare, and inimitable resources and capabilities is a crucial determinant of competitiveness and sustainability.

However, measuring competitive advantage is difficult. The resources' performance serves as a proxy for the metrics ([D'Oria et al. 2021](#); [Smith et al. 1996](#)). Thus, competitive advantage's sustainability refers to a company's ability to maintain its performance over long periods. [Teece \(2007\)](#) argued that competitive advantage supports long-run business performance. Temporary performance does not represent sustainable capability.

### **Real-Earnings Management's Component Persistence Across Periods**

Discussion of REM in the context of earnings management centres on the concept of abnormal or unusual practices. On the contrary, insight into REM as a competitive strategy takes a different view: it should be a continuous activity, the practice on which companies rely. This paper refers to [Paredes and Wheatley \(2017\)](#), who conjectured the usual business representation embedded in the classic REM metrics. Besides, [Gilliam \(2021\)](#) and [Cohen et al. \(2020\)](#) also criticised the specification of the REM measures. Thus, an examination of REM characteristics as a business strategy is essential. The dynamic capabilities of RBV provide insight into such an investigation framework.

Dynamic capability was fundamental for sustaining an organisation's strategy. Developing dynamic capability involves three stages ([Ambrosini et al. 2009](#)). In the first stage, the firms will focus on their resource base. Second, they will renew their capability. The third is the generative level, where firms change and reshape their resource base. Accordingly, strategy's persistence and refinement are fundamental processes in developing dynamic capability. Consistent practice is the essential channel for learning ([Ambrosini et al. 2009](#)). It can enhance the ability to perform tasks quickly and more effectively. Repetition constitutes the essence of learning as a dynamic capability ([Ambrosini et al. 2009](#)). REM as a competitive strategy will show continuous persistence across periods.

**H<sub>1a</sub>: Abnormal operating cash flow demonstrates persistence across periods.**

**H<sub>1b</sub>: Over-production strategy demonstrates persistence across periods.**

**H<sub>1c</sub>: Abnormal discretionary expense demonstrates persistence across periods.**

### Interrelationship Among Real-Earnings Management's Components

REM components possess characteristics of the firm's resources because of the potential competitive advantages they offer. According to [Daft \(1983\)](#), mobilisation is the crucial step in converting any attributes into valuable resources ([Barney, 1991](#)). The process can be a chronological event that establishes an interrelationship among the elements. Organisations' power in gearing operating activity represents mobilisation. Interdependence among activities is crucial in achieving the strategies' goals. Accordingly, the execution will result in an active interrelationship among activities.

Maintaining internal resources is essential because it can promote capability and expand external resources ([Lai et al. 2012](#)). REM can serve as a company's internal resource because of its potential competitive advantage. REM comprises multiple activities. The interrelationships among the elements constitute an internal value chain. REM adopted a lower-prices strategy by providing significant discounts (an abnormal operating cash flow approach) ([Roychowdhury 2006](#)). The method potentially requires support from internal and external value chains. Satisfying the increased demand will encourage escalation in production, procurement, and internal services activities.

**H<sub>2a</sub>: An interrelationship exists between abnormal operating cash flow and abnormal production costs.**

**H<sub>2b</sub>: An interrelationship exists between abnormal operating cash flow and abnormal discretionary expense.**

**H<sub>2c</sub>: An interrelationship exists between the abnormal production cost and the abnormal discretionary expense.**

### Real-Earnings Management and Profitability

REM is an operational activity modification aimed at improving short-run performance ([Tabassum et al. 2015](#); [Bhoiraj et al. 2009](#)). Companies that narrowly exceed

earnings predictions can achieve this. [Tabassum et al. \(2015\)](#) demonstrated that REM was beneficial for current profit, yet deteriorated future performance.

The relationship between REM and profitability stems from the underlying assumption of this practice: avoiding annual losses ([Roychowdhury 2006](#)). Significant discounts can accelerate customer buying and attract potential buyers. Likewise, overstock can suppress the cost of goods sold, resulting in a higher current profit. Similarly, the cuts in discretionary expenses can also create a surplus.

**H<sub>3a</sub>: Abnormal operating cash flow measures positively influence revenue**

**H<sub>3b</sub>: Over-production measures positively influence earnings before interest and tax.**

**H<sub>3c</sub>: Abnormal discretionary expense measure negatively influences net income.**

### Real-Earnings Management and Future Performance

The recent growing literature on REM discussion has emerged into two competing perspectives: the opportunistic versus efficient viewpoint. The first study ([Tabassum et al. 2015](#); [Vorst 2016](#); [Al-Shattarat et al. 2022](#)) documented the adverse effects of REM on future profitability. On the other hand, the second saw it differently. The opportunistic perspective has its roots in the principal-agent conflict discussion, where operational activity is modified to meet earnings forecasts without fundamental capability, thereby sacrificing future performance.

The efficient viewpoint ([Paredes & Wheatley 2017](#); [Jiang et al. 2018](#)) depicts REM as a business strategy to achieve and sustain competitive advantage. [Paredes & Wheatley \(2017\)](#) considered REM a standard business practice. This practice encompasses a continuous profit-oriented strategy (short and long-run perspectives). [Jiang et al. \(2018\)](#)

reported the positive influence of current REM on future performance. The efficient viewpoint of REM emerges from the resource-based view, which assumes that the REM dimensions represent dynamic capabilities for developing and defending competitive advantage.

The classic REM concept relies on regression residuals to express the abnormal activity elements. Since the measure reflects the influence of unidentified variables, the measure will present residuals at any point of observation, cross-sectional, time-series, or panel data. Hence, the impact of the measure will be immediate and ongoing.

**H<sub>4a</sub>: Abnormal operating cash flow metric positively influences future revenue.**

**H<sub>4b</sub>: Over-production metric positively influences future earnings before interest and tax.**

**H<sub>4c</sub>: Abnormal discretionary expense metric negatively influences future net income.**

### **Gross Domestic Product and Real-Earnings Management**

GDP is one indicator of whether the macroeconomy is in a growth phase or a downturn (Duong 2023). A growing economy is a promising situation, with increases in production and consumption of goods and services, allowing companies to strategically exploit these opportunities into real economic advantages using conventional methods. Motivation to be involved in real activity manipulation tends to be lower during economic growth. Overstock during prosperous periods can result in a lower selling price (Chen, Y., & Zhang 2015) which, in turn, can erode profits.

On the contrary, economic downturn is the crucial determinant of real activity manipulation. Low GDP will encourage firms to resort to abnormal methods to gain earnings. Chen et al. (2020) found that firms in low-GDP provinces tend to exhibit higher REM. Managers commit REM to avoid reporting earnings decreases during economic downturns (Duong

2023). As purchasing power declines, sales discounts will be an attractive strategy (Notta and Vlachvei 2015). Besides, the manager can avoid scrutiny because the strategy does not involve accounting standard infringement (Duong 2023).

**H<sub>5a</sub>: Economic growth decreases abnormal operating cash flow.**

**H<sub>5b</sub>: Economic growth decreases overproduction.**

**H<sub>5c</sub>: Economic growth decreases abnormal discretionary expenses.**

### **METHODS**

This work analysed financial data for companies listed on the Indonesia Stock Exchange from 2009 to 2024. The sample comprises 137 (one hundred and thirty-seven) companies continuously listed on the Indonesian stock exchange.

Table 1 presents the variables in interest, comprises of REM components (A\_CFO, A\_Prod, A\_DE), EBIT (earnings before income and tax), NI (net income) and GDP (gross domestic product). This study uses the REM model measurement of Roychowdhury (2006). The hypothesis test uses dynamic panel data two-step GMM for three objectives: (1) the test of the across-period persistence of REM elements, (2) identification of the interrelationship among the elements. While the investigation of the REM effect on earnings sustainability, uses a panel-data regression analysis.

The dynamic panel-data two-step GMM is suitable for a large cross-sectional unit and a small time dimension (this recent work uses 137 firms and 16 years of observations). In addition, one crucial issue underlying the use of dynamic panel data two-step GMM is the detection of recurring symptoms, which underscores the role of lagged dependent variables in the model. This paper uses the lag variables to capture the effect of past values on the current number, indicating persistence. Gujarati (2015) employed this technique to describe how past consumption

costs influence current consumption expenditures. [Farzana et al. \(2024\)](#) interpreted the lagged GDP coefficient as reflecting the variable's persistence over time.

On the other hand, [Moshontz and Hoyle \(2021\)](#) argued that persistence relies on repetition and a resistance to the urge to quit, even if endurance is episodic. Hence, in the REM context, this work interprets the lagged dependent variable (LDV) coefficient as the level of repeated practice.

However, the use of a LDV will yield biased and inconsistent estimates under ordinary least squares and standard panel-data estimators, such as fixed effects, random effects, and first differences ([Nickell 1981](#)). Dynamic panel data two-step GMM allows the

use of lagged dependent variables as regressors ([Ullah et al. 2018](#)). In addition, the technique can address endogeneity by using the LDV as an instrument ([Ullah et al. 2018](#); [Arellano and Bond 1991](#)).

As heteroscedasticity is a crucial issue, this work refers to [Arellano and Bond \(1991\)](#), who argued that the vce(robust) and vce(cluster) options for the dynamic panel data Two-step GMM can solve the problems. Similarly, in the random effects model (FGLS), [Wooldridge \(2010\)](#) stated that a robust estimator is a solution to heteroscedasticity. Vce(robust) proceed estimation that is resistant to unequal errors. In contrast, vce(cluster) relaxes the assumption of heteroscedasticity and within-group correlation.

**Table 1. Variables**

Variable	Definition/Indicator
EBIT	EBIT= Earnings Before Interest and Taxes* $\frac{1}{1,000,000,000}$
NI	NI= Net Income* $\frac{1}{1,000,000,000}$
A_CFO	Abnormal operating cash flow. $\frac{CFO_t}{A_{t-1}} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{t-1}}\right) + \alpha_2 \left(\frac{S_t}{A_{t-1}}\right) + \alpha_3 \left(\frac{\Delta S_t}{A_{t-1}}\right) + \varepsilon_1$ $A\_CFO = \varepsilon_1$
A_Prod	Abnormal production cost $\frac{COGS_t}{A_{t-1}} = \alpha_4 + \alpha_5 \left(\frac{1}{A_{t-1}}\right) + \alpha_6 \left(\frac{S_t}{A_{t-1}}\right) + \varepsilon_2$ $\frac{\Delta INV_t}{A_{t-1}} = \alpha_7 + \alpha_8 \left(\frac{1}{A_{t-1}}\right) + \alpha_9 \left(\frac{\Delta S_t}{A_{t-1}}\right) + \alpha_{10} \left(\frac{\Delta S_{t-1}}{A_{t-1}}\right) + \varepsilon_3$ $Abn\_PROD_t = \alpha_{11} + \alpha_{12} \left(\frac{1}{A_{t-1}}\right) + \alpha_{13} \left(\frac{S_t}{A_{t-1}}\right) + \alpha_{14} \left(\frac{\Delta S_t}{A_{t-1}}\right) + \alpha_{15} \left(\frac{\Delta S_{t-1}}{A_{t-1}}\right) + \varepsilon_4$ $A\_Prod = \varepsilon_4$
A_DE	Abnormal discretionary expenses $\frac{DE_t}{A_{t-1}} = \alpha_{16} + \alpha_{17} \left(\frac{1}{A_{t-1}}\right) + \alpha_{18} \left(\frac{S_{t-1}}{A_{t-1}}\right) + \varepsilon_5$ $A\_DE = \varepsilon_5$
GDP	GDP $\frac{GDP}{1,000,000,000}$

Source: Secondary data synthesised (2025)

Next, the analysis seeks to identify the interrelationships among the elements, a crucial representation of the internal supply chain. Investigation of this potential feature also involves detecting the indirect influence of REM elements on all income metrics. This stage demonstrates how REM components integrate internal resources to provide goods and services to customers.

Dynamic panel data two-step GMM also allows for the detection of earnings-sustainability effects of REM elements. This paper defines this issue as the time effects model. This analysis technique can address the objective by examining lagged REM components influence on the current income metrics.

## RESULTS

Table 2 presents descriptive analysis which shows that the standard deviations are higher than the means, indicating a heterogeneous distribution. This condition suggests the presence of outliers and extreme values. However, the dynamic panel data two-step GMM can handle this problem.

Table 3 shows that some variables exhibit strongly significant relationships with one another (A\_CFOxA\_Prod\_Lg1 with A\_CFO and A\_CFO\_Lg1xA\_Lg1 with A\_CFO\_Lg1), which contributes to the larger standard errors. However, the vital variables show high t-

statistics. Accordingly, the dynamic panel-data two-step GMM remains valid for inference.

Table 4 presents a dynamic panel data two-step GMM analysis that demonstrates that AR1 and AR2, as well as the Hansen and Sargan tests, satisfy the prerequisites for the analysis. Lag-based instruments will be valid if the first-difference residual shows first-order autocorrelation (i.e., a significant AR1). AR2 shows that the first difference does not exhibit first-order autocorrelation, indicating that the instruments are valid ( $Pr > z$  is insignificant).

Next, the Sargan overidentification tests are not significant for any of the models. The tests fail to reject the null hypotheses that all instruments are exogenous. The results are consistent with the Sargan test for overidentification, which also indicates that all instruments are valid.

Next, the first attribute of non-opportunistic REM is the persistence of each component across periods, which reflects predictive value, persistence, and even dependence on a particular practice. Consistent practice also represents long-term learning in capability enhancement and refinement for better and quicker task performance. Testing this assumption involves examining the effect of lag variables on the current of each REM component.

**Table 2. Descriptive analysis**

Variable	Obs	Mean	Std. Dev.	Min	Max
A CFO	2192	.087	.371	-.814	15.632
A Prod	2192	.777	1.888	-25.213	39.384
A DE	2192	-.01	.075	-.689	1.081
A CFO Lg1	2191	.087	.371	-.814	15.632
A Prod Lg1	2191	.777	1.888	-25.213	39.384
A DE Lg1	2191	-.01	.075	-.689	1.081
ACR	2192	-72.023	5135.101	-75989	33048.699
ACR Lg1	2191	-71.993	5136.273	-75989	33048.699
GDP	2192	109445.12	47066.118	21788.51	225670.02
A CFO Lg1xA Lg1	2190	2987.462	75224.955	-15951.568	3457925
A CFOxA Prod Lg1	2191	.068	.441	-4.901	16.046

Source: Secondary data analysed (2025)

Table 3. Correlation Matrix- Pairwise correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) A_CFO	1.000										
(2) A_Prod	0.471	1.000									
(3) A_DE	0.132	0.080	1.000								
(4) A_CFO_Lg1	0.069	0.002	0.114	1.000							
(5) A_Prod_Lg1	0.001	0.375	0.067	0.471	1.000						
(6) A_DE_Lg1	0.025	0.033	0.439	0.132	0.080	1.000					
(7) ACR	-0.102	0.026	-0.026	-0.085	0.017	-0.020	1.000				
(8) ACR_Lg1	-0.084	-0.002	-0.037	-0.102	0.026	-0.026	0.863	1.000			
(9) GDP	-0.020	-0.022	-0.081	-0.010	-0.017	-0.136	-0.004	-0.000	1.000		
(10) A_CFO_Lg1xA_Lg1	0.001	-0.011	0.123	0.917	0.448	0.136	-0.078	-0.077	0.009	1.000	
(11) A_CFOxA_Prod_Lg1	0.818	0.526	0.128	0.116	0.301	0.043	-0.044	-0.027	-0.022	0.067	1.000

Source: Secondary data analysed (2025)

After controlling for two interactions (A\_CFOxA\_Prod\_Lg1 and A\_CFO\_Lg1xA\_Lg1), Table 4 demonstrates that the current abnormal operating cash flow is a function of the lagged value, with almost 40% of the current coming from past activities, indicating the practice's persistence or inertia.

This paper interprets this finding as partial repetition rather than a full process, indicating the presence of recurring components inside the strategy. The persistence of this variable demonstrates reliance on this method, which indicates that implementing this practice is strategically beneficial.

**Table 4. Dynamic Panel Data, Two-Step GMM – Persistence & Interrelationship Analysis**

	(1) A_CFO	(2) A_Prod	(3) A_DE
A_Prod	0.118* (2.110)		-0.003 (-0.460)
A_DE	-1.130 (-1.690)	3.312** (2.000)	
A_CFO_Lg1	0.376** (3.120)	-4.930*** (-4.600)	0.027 (0.310)
A_Prod_Lg1	-0.149** (-2.690)	1.714*** (6.000)	0.008 (0.490)
A_DE_Lg1	-0.372 (-0.910)	-1.036 (-0.830)	0.321** (2.120)
GDP	-0.000** (-2.430)	-0.000 (-0.110)	-7.47e-08 (-1.66)
A_Lg1	0.000** (2.580)	0.000 (1.740)	
A_CFO		2.512*** (9.970)	0.032 (1.530)
ACR			-0.000 (-1.530)
ACR_Lg1			-0.000 (-1.160)
_cons	0.115*** (3.680)	-0.316* (-1.930)	-0.009 (-0.870)
AR1 (z)	(0.048)	(0.042)	(0.021)
AR2 (z)	(0.282)	(0.155)	(0.135)
Sargan test of overid. Restrictions (Prob. > $\chi^2$ )	(0.946)	(0.071)	(0.249)
Hansen test of overid. Restrictions (Prob. > $\chi^2$ )	(0.118)	(0.297)	(0.480)
Collapse option	Yes	Yes	Yes
Robust SE	Yes	Yes	Yes
Clustered SE	Yes	Yes	Yes
N	2190	2190	2191

*T, z, and Prob. >  $\chi^2$  statistics in parentheses*

*\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$*

Hence, customer transactions arising from accelerated sales and payment decisions are not the case. This finding contradicts the mainstream view of opportunistic REM, which assumes that abnormal operating cash flow does not arise from the company's core capabilities. According to this perspective, the practice tends to be temporary, with persistent strategies being almost rare.

Consistency also occurs in the overproduction strategy. The persistence of the operating cash flow manipulation strategy also encourages the abnormal production cost. Table 4 shows that lagged abnormal production costs positively affect current-period value, and that abnormal operating cash flow and overproduction strategies exhibit a reciprocal relationship.

Persistence is also apparent in abnormal discretionary expenses. The lagged measure positively influenced the current number. Although management can exercise discretion to reduce these expenses, the consistent expenditure implies caution in maintaining operational capacity. Furthermore, this recent work does not find a significant positive effect of discretionary expense levels on earnings, indicating that the analysis does not support the assumption of opportunistic REM.

The persistence across periods affirmed the indication of regularity, at least partly, suggesting that operating cash flows can also reflect business strategy. This finding confirms the findings of [Pappas et al. \(2019\)](#) and [Commerford et al. \(2019\)](#). The abnormal components tend to reflect the role of the uncontrolled variables in the operating cash flow variations. The adverse effects on future EBIT or net income were undiscoverable. Accordingly, the basic assumption of opportunistic REM is unmet.

However, the patterns tend to be revised in the next period, as indicated by the negative effects of  $A\_CFO\_Lg1$  on  $A\_Prod$  and the negative influence of  $A\_Prod\_Lg1$  on  $A\_CFO$ , which is a negative cross-lagged effect.

Although this work shows the persistence of abnormal operating cash flow and an overproduction strategy, the negative cross-lagged can reduce the long-term multiplier.

The second attribute of REM as a competitive strategy is its hidden characteristics, such as its internal supply chain, as indicated by the interrelationships among its elements. This work identified a reciprocal relationship between abnormal operating cash flow and abnormal production costs. Both strategies increased (decreased) simultaneously, i.e., abnormal operating cash flow and overproduction reinforced each other in the same period.

[Marsh et al. \(2024\)](#) call this dilemma the chicken-egg conundrum, which suggests a contemporary complementary relationship between the two variables. The increase in demand from the modified sales strategy boosted production activity. Likewise, the abundance of finished goods from the overproduction strategy encourages the companies to strengthen sales through significant discounts.

Sufficient finished goods availability is a crucial prerequisite for boosting sales and cash flow. Accordingly, managers tend to utilise their resources to increase performance through normal operational activities. Hence, the escalation of abnormal production costs represents an effort to exploit opportunities into real economic advantage, rather than an opportunistic choice.

This work considers two perspectives to unravel the complexity of the reciprocal relationship between the two variables. Firstly, the role of the external economic situation in encouraging real-earnings management. GDP shows a significant influence (with a negative direction) only on  $A\_CFO$ . Accordingly, macroeconomic conditions can drive internal supply chain processes, which encourage management to run abnormal operating cash flows. In the next stage, the strategy encourages management to enhance production volume.

**Table 5. Panel Data Regression – Income Sustainability**

	(4) NI	(5) NI	(6) NI	(7) EBIT	(8) EBIT	(9) EBIT
<b>A_CFO</b>	609.4** (3.18)	222.8** (2.77)	287.3** (2.77)	917.9** (3.24)	332.9** (2.03)	456.0** (2.40)
<b>A_Prod</b>	12.49 (1.16)	-4.632 (-1.40)	-3.878 (-0.97)	17.73 (1.26)	5.272 (0.54)	2.778 (0.30)
<b>A_DE</b>	368.6 (0.96)	65.84 (0.21)	139.4 (0.38)	644.2 (1.12)	203.8 (0.42)	335.2 (0.58)
<b>A_CFO_Lg1</b>	1236.5*** (4.06)	451.9*** (4.61)	621.0*** (5.05)	1728.6*** (4.41)	600.4*** (3.48)	909.6*** (4.00)
<b>A_Prod_Lg1</b>	-13.19 (-0.59)	-25.04 (-1.74)	-26.50 (-1.76)	-13.84 (-0.44)	-19.32 (-1.14)	-25.91 (-1.26)
<b>A_DE_Lg1</b>	373.5 (1.41)	-16.45 (-0.08)	33.12 (0.14)	595.8 (1.84)	178.8 (0.59)	241.0 (0.84)
<b>A_Lg1</b>	0.0877*** (11.04)	0.054** (2.41)	0.064** (2.77)	0.139*** (13.93)	0.076*** (3.61)	0.097*** (3.77)
<b>A_CFO_Lg1*A_Lg1</b>	-0.010*** (-5.83)	-0.005** (-3.52)	-0.007*** (-4.20)	-0.0152*** (-6.52)	-0.007*** (-4.26)	-0.010*** (-4.16)
<b>A_CFO*A_Prod_Lg1</b>	-62.09 (-0.72)	-44.62 (-0.69)	-44.84 (-0.66)	-159.1 (-1.20)	-110.1 (-1.34)	-112.8 (-0.97)
<b>_cons</b>	-288.0*** (-4.76)	120.0 (0.60)	12.80 (0.07)	-435.0*** (-5.58)	268.5 (1.36)	52.79 (0.27)
<b>N</b>	2190	2190	2190	2190	2190	2190
<b>Model</b>	Common Effects	Fixed Effects	Random Effects	Common Effects	Fixed Effects	Random Effects
<b>Robust SE</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Clustered SE</b>	Yes	Yes	Yes	Yes	Yes	Yes

*t*-statistics in parentheses

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

The negative direction suggests a situation where abnormal operating cash flow will depend on unfavourable situations. The decline in demand and cash payments during the economic slowdown prompted a modified sales strategy, including significant discounts. Similarly, management may avoid this strategy during periods of growth.

Next, the real-earnings management effect on earnings sustainability shows that only abnormal operating cash flow can positively influence current and future income. This finding confirms the first perspective: the internal supply chain begins with an abnormal operational cash flow policy and moves to other strategies. These findings affirm that abnormal operating cash flow plays a key role in real-earnings management.

Finally, Table 4 shows that abnormal production cost is the only variable related to the abnormal operating cash flow strategy, not to the earnings metrics (current and future), thereby rejecting the hypothesis of an overproduction strategy to inflate earnings. Accordingly, the contemporary complementary relationship with abnormal operating cash flow tends to exhibit over-production as the supporting strategy.

The third attribute of REM as a competitive strategy is its potential impact on income sustainability. Table 5 presents the panel data analysis, which indicates a positive influence of current and lagged abnormal operating cash flow on earnings metrics, namely net income and earnings before interest and taxes. The abnormal operating cash flow confirms the basic assumption that the objective of REM is to create immediate profit. The positive influence of lagged abnormal operating cash flow on all dependent income metrics reflects the technique's sustainability effects on performance, suggesting a deviation from the mainstream view of REM's deteriorating effect on future performance. As abnormal operating cash flow is close to income-generating activities, the sustainability effects also represent an efficient strategy, violating the assumption of accelerated timing of customer

buying and cash payments. In addition, the positive effects indicated the value relevance of abnormal operating cash flow in predicting future performance. These findings differ from [Lim & Mali \(2023\)](#), who found a positive influence of all real earnings management elements on current and future performance.

This study found no significant effect of overproduction strategies on net profit and pre-tax income. Implementing an overproduction strategy to achieve immediate, direct profits is risky. The consumption of economic resources for this practice can reduce future capabilities. As this study also found persistence of abnormal production cost strategies between periods, the opportunistic nature of this strategy is not apparent based on the study sample. Overproduction tends to support an abnormal operating cash flow strategy.

A significant impact of abnormal discretionary spending on profitability metrics is also not apparent. Abnormal discretionary costs refer to an unusual portion of operating expenditure determined by managers' preference. A positive (negative) abnormal value represents an excessive cost (saving) above (under) the predicted level. Discretionary expenses are crucial; however, they are still a supporting component. Accordingly, managers can exercise their judgment regarding the volumes of these items freely.

## CONCLUSION

This paper presented crucial theoretical implications of real-earnings management from the perspective of the resource-based view. The proposed method confirms that efficient REM is valid, indicating the potential for further discussion of the theory in the financial accounting realm. The classic measure of REM does not fully reflect opportunistic financial reporting practice. This paper's analysis aligns with established assumptions about non-opportunistic real earnings management.

Firstly, this paper presents the persistence of real-earnings management

practice, which violates the temporary or abnormal practice. The finding implies dependence or reliance on the practice and the long learning process for building capabilities.

Secondly, several analyses support this crucial finding: real earnings management is an internal supply chain. The contemporary complementarity between abnormal operating cash flow and overproduction strategy represents an interdependence between them.

However, the subsequent analysis suggests that the overproduction strategy depends on abnormal operating cash flow. Abnormal operating cash flow is the only strategy that supports earnings sustainability, reflecting the high dependence of real-earnings management practice on it. Finally, the influence of external macroeconomic conditions is limited to abnormal operating cash flow, highlighting the key role of this strategy in triggering other activities.

Third, this paper demonstrates the effects of abnormal operating cash flow on income sustainability. The finding is crucial evidence against the hypotheses of opportunistic real-earnings management and its deteriorating effects on future performance. Real-earnings management as a competitive strategy effectively provides a competitive advantage.

The macroeconomic variable shows a negative influence of a conducive situation on

the abnormal operating cash flow strategy. During an economic slowdown, companies tend to modify their sales and cash collection strategies to create and exploit opportunities creatively, while committing to opportunistic operational changes will be less attractive.

However, this paper also acknowledges that limitations remain. This paper uses an ex-post analysis, which is effective for detecting past events. The method cannot determine whether the current practice is efficient or opportunistic. An alternative approach is crucial, as developing such a method is still hard work.

This paper provides an avenue for future research. As the central issue lies in the real-earnings management metrics, the development of alternative measures that reflect the opportunistic practice is urgent. Incorporating the still-unexplored potential determinants of each criterion to complement the appropriate measurement using a regression residual model is urgent.

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