

Exploring the interplay of earnings management, business strategy and market competition: the case of Indonesia and South Korea

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Adela Cornelia Fedora, Felizia Arni Rudiawarni and
Dedhy Sulistiawan

*Faculty of Business and Economics, University of Surabaya,
Surabaya, Indonesia, and*

Abdurrahman Gümrah

Vocational School of Social Sciences, Selçuk Üniversitesi, Konya, Turkey

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Abstract

Purpose – The purpose of this study is to investigate the connection between earnings management, business strategy, and market competition.

Design/methodology/approach – The study utilizes data from non-financial companies listed on the Indonesia and South Korea Stock Exchange between 2017 and 2021, involving 2,598 firms from Indonesia and 3,256 firms from South Korea. We use data panel analysis to explore the relationships between variables.

Findings – Firms using cost leadership are prone to earnings management, while differentiation strategies are less inclined to do so. Market competition negatively correlates with earnings management in Indonesia and South Korea. Market competition moderates the relationship between differentiation strategy and earnings management in both countries. When profitability is considered, the results remain consistent, particularly in Indonesia.

Research limitations/implications – This research enriches previous studies on earnings management and business strategy by examining the extent of industry competitiveness in developed and developing markets.

Practical implications – This finding is significant for managers, guiding them in the selection of an appropriate business strategy within a competitive environment.

Originality/value – This study is unique in that it examines the subject matter in both developed and developing countries, specifically Indonesia and South Korea, to compare the differences.

Keywords Earnings management, Business strategy, Cost leadership, Differentiation, Market competition

Paper type Research paper

1. Introduction

As globalization exerts its influence, businesses encounter pressure to engage in earnings management to enhance their performance and financial attractiveness. Financial statements, vital tools for investors, become a driving force behind this motivation. Managers in competitive sectors risk exploitation by rivals if they perform inefficiently, pushing them toward earnings management to safeguard their company's reputation and interests (Masulis *et al.*, 2007). Market competition profoundly impacts business strategy (Wu *et al.*, 2015).



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Recent research underscores the connection between business strategy and financial reporting procedures (Bentley *et al.*, 2013). There are different types of business strategies that can be implemented but, in this case, the business strategies that are going to be discussed further are cost leadership and differentiation strategies. According to Banker *et al.* (2014), firms that embrace the cost leadership approach seek to grow their market presence by gaining a competitive edge through low-cost operations in comparison to their competitors. These companies may achieve cost leadership by building large-scale manufacturing facilities, improving processes, lowering costs, implementing Total Quality Management (TQM), adopting benchmarking methods, and limiting overhead expenses. In contrast, companies that use the differentiation approach strive to achieve a competitive advantage by investing in the creation of products or services that have distinct traits that customers value. This allows these companies to demand higher fees for their unique offers. Examples of companies that implement this strategy include Apple and Tesla where these companies spend in R&D, design, and marketing in order to provide products or services that stand out from the competition. In addition, based on the study presented by Wu *et al.* (2015), companies that use a cost leadership strategy are more likely to engage in Real Activities Manipulation (RAM) than firms that use a differentiation approach. Understanding these dynamics aids decision-makers, such as managers, in crafting effective strategies (Herusetya *et al.*, 2023). It facilitates informed decision-making, fostering transparency, accountability, and long-term value generation in the Indonesian business context.

This paper aims to provide empirical evidence regarding the impact of market competition and business strategy on earnings management in Indonesia and South Korea. Indonesia and South Korea represent two different characteristics of countries in the Asian region. Indonesia is a representative of emerging markets, while South Korea is a representative of developed markets. Based on data from the World Bank (2023), Indonesia is still in the process of industrialization and economic development and still faces infrastructure challenges. South Korea has rapid industrialization and a developed economy with a highly developed industrial sector. It is known for advanced technology, manufacturing, and innovation. In today's fast-evolving world driven by globalization, Indonesia, as an emerging market, aims to boost its business competitiveness to a score of 5.0 out of 7.0 by 2024 (OECD, 2022). In contrast, as an established market, South Korea is striving to sustain and further enhance its rapid industrialization and developed economy. According to the World Bank's (2019) report, South Korea is positioned as the fifth most favorable country for doing business, whereas Indonesia is placed 73rd. In 2023 World Competitive Ranking, South Korea rise to 28th place and Indonesia to 34th, marking a 10-place increase from the previous year (IMD World Competitive Center, 2023).

However, despite having different characteristics, both countries are connected by the Indonesia-Korea Comprehensive Economic Partnership Agreement (IK-CEPA), which represents a good relationship (Ministry of Trade of the Republic of Indonesia, 2019). As of 2023, the diplomatic ties have attained the milestone of 50 years (Embassy of Republic Indonesia in Seoul, Republic of Korea, 2023). Both nations commit to enhancing their collaboration, as outlined in the IK-CEPA partnership agreement, and to bolstering South Korean investments in Indonesia. South Korea's investment in Indonesia is in the top 10 foreign countries with the highest investment (Ministry of Investment Indonesia, 2023). Conducting research that examines the crucial factors between the two countries is vital as their collaboration expands.

Prior studies investigated the correlation between business strategy and financial performance. Agustia *et al.* (2020) discover that corporate strategy affects bankruptcy risk while earnings management cannot. Purba *et al.* (2022) find that cost-leader firms opt for accrual earnings management (AEM). Conversely, differentiators favor real earnings management (REM). Competition within the industry has a crucial role in shaping a

company's strategic decisions. Salehi *et al.* (2020) demonstrate that the degree of market rivalry impacts the choices of a company's investments. Using data from Compustat, Hassan *et al.* (2022) discover that managerial ability influences the correlation between earnings management and market competitiveness. Meanwhile, Wu *et al.* (2015) reveal that Chinese A-list enterprises that adopt cost leadership strategies are more likely to engage in REM, particularly in areas characterized by intense competition. Their results correspond with those of Braga *et al.* (2023), who conducted a study in the US using the Miles and Snow business strategy classification. They discover that organizations operating as prospectors in highly competitive industries have a tendency to engage in REM to boost their financial performance.

This research fills the gap in previous studies. We use market competition as a moderating variable to investigate the influence of business strategy on AEM. Wu *et al.*'s (2015) and Braga *et al.*'s (2023) find business strategy influences REM. In this research, we employ AEM to bridge the gap because (1) the activities within the business strategy genuinely embody REM. For instance, firms in the cost leadership sector often face low profit margins, prompting them to reduce expenses in an attempt to maintain their competitive advantage; (2) cost leadership firms have low profit margins, so the company pursues increased profits without sacrificing the real substance of business activities by executing AEM, and (3) we also conduct a comparative analysis for developing and developed markets. Indonesia represents a developing market, while South Korea represents a developed one; however, their accounting standards are not significantly different because they both adhere to IFRS (IFRS, 2024). This similarity in accounting standards ensures that it will not obscure the results obtained.

This paper provides theoretical and practical implications and contributions. From theoretical implication, this paper enhances the existing research on earnings management and contributes to the field of business strategy by examining the extent of industry competitiveness in developed and developing markets. Secondly, through the comparison of stock markets with distinct features, we can obtain a more comprehensive understanding of the interaction between firm strategy, intense rivalry, and earnings management in varying circumstances.

This study offers valuable insights for managers. Understanding the influence of market competition and business strategy on earnings management enables informed strategic decisions, potentially improving financial reporting methods and contributing to transparent, accountable, and value-driven corporate policies. Moreover, this research enriches the academic literature by offering specific insights into Indonesian and South Korean firms, serving as a resource for future research and advancing comprehension of earnings management, market competition, and business strategy within the accounting and finance field. Studying these two countries can help readers understand various important issues in economic development and international cooperation, especially in the Asian region. In essence, this study bridges the gap between theory and practice, shedding light on the interplay of these factors in the Indonesian and South Korean business landscape. The paper is structured into sections that cover a literature review, research methodology, followed by results and discussion, and the last section concludes.

2. Literature review

Earnings management is the practice of managers using their discretion in reporting a company's financial performance to mislead certain stakeholders or to exert influence over contractual agreements. AEM involves exploiting accounting policies in gray areas, allowing companies to manipulate earnings. Managers also exercise discretion over accruals, determining items such as provisions for uncollectible accounts and warranty expenses.

Earnings derive from the combination of cash flow from operations (CFO) and accruals, which can include both non-discretionary and discretionary elements. When public companies face financial challenges and their earnings fall below market expectations, it can lead to stock price declines and increased borrowing costs, motivating them to engage in earnings management as a response (Li *et al.*, 2020).

As the market sees an ongoing influx of new rivals, existing companies are forced to take proactive measures to secure their existence. Every day, these new rivals launch innovative products that expand the market with value-added approaches, thus strengthening the competitive environment. Furthermore, product market competition helps to reduce knowledge asymmetry. Companies that operate in highly competitive industries sometimes experience financial restrictions as a result of their restricted capacity to set product pricing. As a result, they must seek lower-cost finance from the market. To do so, businesses are required to provide more information to capital providers, which aids in the reduction of information asymmetry (Lee *et al.*, 2019).

2.1 Market competition and earnings management

The level of economic complexity has an impact on earnings management, as demonstrated by Ahmadi *et al.* (2023). Economic complexity encompasses the complex nature of market competitiveness, which ranges from intense competitiveness to complete monopoly. In a highly competitive market, firms must effectively utilize economic resources to generate superior products at prices that are more reasonable than those offered by their rivals (Salehi *et al.*, 2020). Previous literature examines the influence of market rivalry on managerial motivations. Competition can exert both beneficial and detrimental effects on managerial motivations. According to Agarwal *et al.* (2020), competition plays a crucial role in enhancing company performance across different areas, such as facilitating strategic management decisions, fostering innovation (Porter, 1990), and promoting production efficiency and resource allocation (Nickell, 1996). Conversely, as competition intensifies, agency problems worsen, and managers face increased pressure to uphold their reputation and keep their incentives. Golan *et al.* (2015) demonstrate that market rivalry can diminish internal governance, resulting in more managerial discretion.

The level of competition in the market affects managers' engagement in earnings management, as noted by Lemma *et al.* (2018). While Cheng *et al.* (2013) discovered that product market rivalry enhances the quality of revenues, some other researchers argue the contrary. According to Shleifer (2004), competitive pressures lead to unethical behavior and aggressive corporate accounting practices. Intense external pressures from a competitive environment led to internal demands, in which managers are pushed to maintain the company's competitiveness. DeFond and Park (1999) highlight that managers are more inclined to use higher degrees of AEM in highly competitive industries, driven by career concerns and the pressure to outperform peers. In such situations, rewards and penalties serve as motivating factors, prompting managers to resort to earnings management as a straightforward strategy. Markarian and Santaló (2014) support this view that manipulating profits becomes more appealing due to the substantial increase in market value resulting from positive earnings reports. Research by Shi *et al.* (2018) and Harris (2024) finds that managers choose to use AEM when facing high competition rather than REM. They argue that as competition intensifies, REM practices can be costly and negatively impact a company's competitiveness, involving operational and investment decisions with adverse effects. Thus, based on the existing research, we propose the following hypothesis:

- H1. There is a positive relationship between market competition and earnings management.

2.2 Business strategies and earnings management

According to [Chen and Keung \(2019\)](#), business strategies are characterized by the tactics taken by organizations to compete and preserve their competitive advantage. The effective implementation of a business strategy is crucial for a company to not only survive but thrive in a fiercely competitive market.

Companies employing a cost leadership strategy prioritize efficiency and cost reduction, actively managing operating expenses to minimize various operational costs while maintaining a specific quality level ([Purba et al., 2022](#)). The primary focus is on improving overall business performance, including the ability to produce and distribute products at a lower cost than competitors ([Agustia et al., 2020](#)). While this approach can boost market demand by offering products at a lower price, it comes with the caveat that cost-cutting measures, like using lower-grade raw materials, may compromise product quality and alienate quality-conscious consumers who may opt for higher-quality alternatives, potentially leading to the discontinuation of lower-quality offerings ([Suprihono et al., 2021](#)).

In contrast, a differentiation strategy focuses on creating substantial profit margins by developing distinctive product attributes that set a company apart from its competitors ([Agustia et al., 2020](#)). As emphasized by [Lim et al. \(2003\)](#), firms can achieve differentiation by making product features and aesthetics appealing to a broad customer base, enhancing customer service and adding new services, investing in R&D, advancing innovation and technology, continually improving quality, bolstering marketing and brand development, seeking high-quality feedback, and enhancing human resource management. However, [Otto et al. \(2020\)](#) find that differentiation does not guarantee a competitive advantage if the industry's standard product meets consumer needs. The effectiveness of differentiation lies in creating attributes that are challenging for rivals to replicate, potentially resulting in greater product flexibility, enhanced services, increased convenience, reduced maintenance, and added benefits. A successful differentiation strategy allows companies to command higher prices, build customer loyalty, and gain a deeper understanding of stakeholder needs, enabling them to manage associated costs more effectively ([Suprihono et al., 2021](#); [Chen et al., 2018](#)). Differentiated companies are also more adept at seizing new products and market opportunities, often necessitating higher investment in research and development (R&D) compared to their counterparts.

Companies pursuing a cost leadership strategy heavily rely on external financing due to their primary focus on achieving economies of scale and operational efficiency, requiring substantial investments in machinery, equipment, and resources. Their narrower profit margins compared to firms employing differentiation strategies make it challenging to fund their operations internally, leading to external financial pressure and motivating them to engage in earnings management to enhance financial performance. Conversely, companies employing differentiation strategies prioritize the development of unique products and often invest in research and development, exposing them to innovation-related risks ([Wu et al., 2015](#)). Unlike cost leaders, differentiators face less external pressure, have higher profit margins, and rely less on external finance, making them less inclined to resort to earnings management. Therefore, we propose the second hypothesis:

H2a. Cost leadership strategy is positively related to earnings management.

H2b. Differentiation strategy is inversely related to earnings management.

2.3 Market competition, business strategies, and earnings management

[Hambrick \(1983\)](#) argues that a company's strategy is linked to its capacity to adjust and respond to its environment. Intense competition is a critical aspect that organizations must

adjust to. Porter (1985) argues that severe competition poses challenges for organizations striving to preserve their positions as cost leaders or differentiators. This is the underlying factor that drives companies to engage in earnings management. Wu *et al.* (2015) suggest that enterprises facing intense competition will utilize all available resources, including engaging in earnings management, to ensure their survival.

Expanding on the earlier study by Wu *et al.* (2015), they establish a connection between the effects of differentiation strategy and cost leadership on market competition and earnings management. The results demonstrate that companies that pursue a cost leadership strategy are more likely to engage in earnings management to face intense competition, with the severity of the practice increasing with the intensity of the competition.

Nevertheless, the escalating rivalry not only affects cost leaders but also impacts differentiators due to intensifying competitiveness. In facing competition, differentiators must generate projects that have a favorable net present value. Therefore, according to Kothari *et al.* (2009), managers try to conceal unfavorable information to protect their professional careers and reputations. As a result, we put forth the following hypotheses:

- H3a. The interplay of market rivalry and cost leadership strategy has a positive effect on earnings management.
- H3b. The interplay of market rivalry and differentiation strategy has a positive effect on earnings management.

3. Research methodology

This paper encompasses all non-financial firms listed on the Indonesia Stock Exchange (IDX) and Korea Stock Exchange (KRX) during the period from 2017 to 2021, resulting in a total of 3,259 (3,697) firm-years for IDX (KRX). To ensure data consistency, firms with financial reporting periods other than December 31st, incomplete information, and currencies other than Indonesia Rupiah and Korean Won are excluded, yielding a final dataset of 2,598 (3,256) firm-year observations for IDX (KRX). The data was sourced from Unicorn Data Service, www.idx.co.id and www.krx.co.id.

3.1 Accrual earnings management (AEM)

This study uses absolute discretionary accruals as the proxy for AEM. We follow matched discretionary accrual (Kothari *et al.*, 2005) to measure AEM, which is operationalized as follows:

$$\frac{TAC_{jt}}{A_{jt-1}} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{jt-1}} \right) + \alpha_2 \left(\frac{\Delta REV_{jt}}{A_{jt-1}} \right) + \alpha_3 \left(\frac{PPE_{jt}}{A_{jt-1}} \right) + \alpha_4 \frac{Net\ Income}{A_{jt-1}} + \epsilon_{jt} \quad (1)$$

The coefficients α_0 , α_1 , α_2 , α_3 and α_4 from Eq. (1) are used to calculate the NDA_{it} as follows:

$$NDA_{it} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{it-1}} \right) + \alpha_2 \left(\frac{\Delta REV_{jt} - \Delta REC_{it}}{A_{it-1}} \right) + \alpha_3 \left(\frac{PPE_{it}}{A_{it-1}} \right) + \alpha_4 \frac{Net\ Income}{A_{it-1}} + \epsilon_{it} \quad (2)$$

Where NDA_{it} represents non-discretionary accruals for firm i for period t .

By deducting NDA from Total Accrual (TAC), the amount of Discretionary Accrual (DA) as proxy for AEM is finally determined.

$$AEM_{it} = |DA_{it}| \text{ where } DA_{it} = \frac{TAC_{it}}{A_{it-1}} - NDA_{it} \quad (3)$$

AEM_{it} is the absolute worth of the firm's discretionary accruals (DA_{it}). Greater earnings management is indicated by the higher AEM.

3.2 Business strategy measures

We use two business strategies: cost leadership and differentiation strategy. According to David *et al.* (2002), asset turnover of operation is a crucial indicator of cost leadership (CL) because it shows how well a company uses its resources to achieve operational excellence and, consequently, the level of cost leadership it practices. The higher the ratio between output and input, the better the firm uses its resources to achieve operational excellence (Agustia *et al.*, 2020). We utilize asset turnover of operations as a proxy for CL and compute it using Equation (4) following Wu *et al.* (2015). A higher asset turnover of operations suggests a higher probability that the business adopts CL strategy.

$$CL = \frac{\text{Operating Sales}}{\text{Average Operating Assets}} \quad (4)$$

$$\text{Operating Assets} = \text{Total Asset} - \text{Cash} - \text{Short Term Investment} \quad (5)$$

Conversely, for differentiation strategy, the goal is to obtain a competitive edge through the special and distinctive qualities of the goods and services that are provided to clients. Profit margin is used in this study as a gauge of differentiation strategy. Businesses must also make large investments in ongoing product development through R&D expenses if they want to produce unique items. Therefore, profit margin is determined using the following formula and acts as a stand-in for differentiation strategy (Diff) (Agustia *et al.*, 2020). A higher profit margin suggests a higher probability that the business adopts Diff Strategy.

$$\text{Diff} = \frac{(\text{Operating Income} + \text{R\&D Exp})}{\text{Sales}} \quad (6)$$

3.3 Market competition and control variables

Market competition is the degree of rivalry within the business sector. The Herfindahl-Hirschman Index (HHI) is used as the proxy for industrial-level competition. It is employed to assess and rank industries based on their level of rivalry during a given year (Markarian and Santalo, 2014). We transform HHI into a dummy variable so that the reading could be the same. If the HHI is less than the mean, signifying higher competitiveness in an industry, we use dummy DHHI = 1. Conversely, when the HHI is more than the mean, the industry is considered more concentrated; we set dummy DHHI = 0. Thus, in each industry, the value is standardized for the same year to choose which industry is the most competitive.

$$HHI = \sum_{i=1}^n (X_i/X)^2 \quad (7)$$

where X_i represents the sales of firm i and X represents the overall sales in a certain sector.

This study controls for market share (SHARE). The higher the market share, the more dominant the company is in the industry and the more pressure for firms to perform earnings management (Wu *et al.*, 2015).

$$SHARE = X_i / X \tag{8}$$

We also control for firm’s characteristics, including Size (SIZE), Leverage (LEV), and Growth (GROWTH), where:

$$SIZE = \text{The natural logarithm of year – end total assets} \tag{9}$$

$$LEV = \frac{\text{Year – end Total Liabilities}}{\text{Year – end Total Assets}} \tag{10}$$

$$GROWTH = \frac{\text{Current Sales – Previous Sales}}{\text{Previous Sales}} \tag{11}$$

A firm’s SIZE, LEVERAGE, and GROWTH all play significant roles in shaping its decision-making processes including earnings management. Larger firms often have more complex decision structures, while higher levels of leverage can influence managerial choices in operational activities (Dechow and Sloan, 1991; Ghorbani and Salehi, 2020). Additionally, growth is a contributing factor, as companies experiencing rapid growth tend to exhibit a greater inclination toward earnings management practices (Huang et al., 2015).

3.4 Regression model

In order to conduct an empirical examination of H1, H2a, and H2b, we construct a regression model with AEM as the dependent variable. We incorporate CL as an indicator of the cost leadership strategy, Diff as a measure of the differentiation strategy. Additionally, we include the market competition index (DHHI) in the model, considering its interactions with the business strategy variables as test variables for H3a and H3b. To control for potential influences, we include SHARE, SIZE, LEV and GROWTH as variables in our model.

$$AEM_{i,t} = \beta_0 + \beta_1 DHHI_{i,t} + \beta_2 CL_{i,t} + \beta_3 Diff_{i,t} + \beta_4 DHHI_{i,t} \times CL_{i,t} + \beta_5 DHHI_{i,t} \times Diff_{i,t} + \beta_6 SHARE_{i,t} + \beta_7 SIZE_{i,t} + \beta_8 LEV_{i,t} + \beta_9 GROWTH_{i,t} + \varepsilon_{i,t} \tag{12}$$

H1 is accepted if $\beta_1 > 0$, while we accept H2a if $\beta_2 > 0$, and for H2b if $\beta_3 < 0$. Whereas for H3a and H3b, we expect the coefficient of β_4 and $\beta_5 > 0$.

4. Results and discussions

The data used in this study originate from IDX and KRX. Consequently, we compare the regression results between these two countries. Table 1 shows the sample selection process for both countries. Data from IDX originally consisted of 3,259 firm-years, while KRX

Description	Indonesia (firm-years)	South Korea (firm-years)
Total data	3,259	3,697
(–) Financial service	(480)	(301)
(–) Incomplete information	(181)	(140)
Total observations	2,598	3,256

Table 1.
Sample selection

Source(s): Table created by authors

consisted of 3,697 firm-years. We eliminate firms in financial service sectors – 480 firm-years for IDX and 301 firm-years for KRX – since they are regulated industries and have a specific financial performance measurement. We exclude observations with incomplete data, resulting in the removal of 181 (140) firm years for IDX (KRX). IDX has a total of 2,598 firm years, while KRX has 3,256 firm-years.

Table 2 presents the descriptive statistics for the data collected from Indonesia and South Korea.

According to the descriptive statistic data presented in Table 2, the mean (maximum) value of AEM IDX is 0.097 (3.020), whereas AEM of KRX has an average and maximum value of 0.045 and 1.417, respectively. The data indicates that Indonesia has a greater AEM than South Korea. The data shown in Table 2 indicates that industrial competition in South Korea is significantly intense, with 94% of the observations belonging to highly competitive industries. In contrast, in Indonesia, only 66% of the observations are associated with industries that exhibit a high level of competition. The strategy of cost leadership tends to dominate companies on both stock markets.

We also ran the Pearson correlation for both stock markets (untabulated). IDX data demonstrates a positive correlation between AEM and CL and DHHI×CL. Meanwhile, neither Diff nor DHHI correlated significantly with AEM. Data from KRX shows that AEM has a significant correlation with almost all of the variables in this dataset. On both exchanges, SIZE (GROWTH) exhibits a negative (positive) correlation with earnings management.

4.1 Regression results and discussion

We run panel data regression for each country. Table 3 includes all the data from IDX.

DHHI has a negative effect on AEM. H1 is not supported. CL has a positive impact on AEM, meaning it increases the propensity for earnings management behavior. This finding supports our H2a. The tests for H2b show that Diff cannot explain AEM. Based on the

	Minimum	Maximum	Mean	SD
<i>Panel A: Indonesia (N = 2,598)</i>				
AEM	<0.000	3.020	0.097	0.155
DHHI	0	1	0.657	0.475
CL	<0.000	9.436	1.024	1.122
Diff	-0.995	0.999	0.068	0.225
DHHI × CL	0.000	9.436	0.655	1.047
DHHI × Diff	-0.995	0.999	0.053	0.185
SHARE	<0.000	0.701	0.017	0.049
SIZE	16.707	33.537	27.290	3.075
LEV	<0.000	5.168	0.509	0.364
GROWTH	-0.999	8.985	0.190	0.771
<i>Panel B: South Korea (N = 3,256)</i>				
AEM	<0.000	1.417	0.045	0.060
DHHI	0	1	0.940	0.246
CL	0.0341	6.903	1.062	0.593
Diff	-0.994	0.892	0.052	0.108
DHHI × CL	0.000	6.903	0.994	0.628
DHHI × Diff	-0.994	0.892	0.046	0.102
SHARE	<0.000	0.780	0.015	0.051
SIZE	23.318	33.567	27.611	1.685
LEV	0.024	1.259	0.463	0.203
GROWTH	-0.975	5.211	0.086	0.353

Source(s): Table created by authors

Table 2.
Descriptive statistics

Independent variables	Dependent variable: AEM		
	(1) Full sample Coeff (<i>t</i> -value)	(2) Profit firms Coeff (<i>t</i> -value)	(3) Loss firms Coeff (<i>t</i> -value)
C	-0.239 (-1.136)	-0.513** (-1.849)	-0.152 (-0.474)
DHHI	-0.039*** (-3.322)	-0.074*** (-3.590)	-0.035** (-1.873)
CL	0.022*** (2.477)	0.011 (0.972)	-0.017 (-0.732)
Diff	0.015 (0.504)	-0.030 (-0.388)	0.023 (0.615)
DHHI × CL	0.017*** (2.467)	0.027*** (3.026)	0.024* (1.466)
DHHI × Diff	0.049* (1.460)	0.162** (2.230)	-0.022 (-0.491)
SHARE	0.022 (0.087)	-0.014 (-0.047)	0.429 (0.458)
SIZE	0.011* (1.484)	0.021** (2.110)	0.010 (0.845)
LEV	0.029* (1.382)	0.086** (2.273)	-0.017 (-0.607)
GROWTH	0.009** (1.905)	0.032*** (4.232)	-0.005 (-1.033)
Adjusted <i>R</i> ²	0.262	0.264	0.328
<i>F</i> -statistic	2.353	2.100	2.066
DW	2.520	2.720	3.717
Fixed Effect	Yes	Yes	Yes
<i>N</i>	2,598	1,890	708

Table 3.
Regression result
– IDX

Note(s): *, **, *** indicates significance at the level of 10, 5 and 1%, respectively. One-tailed test
Source(s): Table created by authors

examination of [H3a](#) and [H3b](#), we found that the coefficient $DHHI \times CL$ and $DHHI \times Diff$ are positive and significant. Our study’s findings provide evidence in favor of hypotheses [H3a](#) and [H3b](#). Due to the growing rivalry, companies utilize their capabilities to stay in the market and avoid negative consequences, so they perform AEM ([Wu et al., 2015](#)). SHARE does not have the ability to explain AEM. In addition, the variables SIZE, LEV, and GROWTH encourage the practice of AEM.

To bolster result reliability, we conducted a more in-depth analysis by classifying Indonesia’s sample into two distinct categories: profit firms and loss firms. The findings for profit firms closely mirror those in full sample, except for CL, indicating that profit firms predominate within Indonesia’s sample.

For loss firms ([Table 3](#) Column 3), it becomes evident that DHHI has a negative effect on AEM, strengthening the evidence that intense competition can hinder company earnings management behavior. [H1](#) is also not supported in loss firms sample.

Similar to IDX firms, KRX companies also exhibit a clear pattern, as seen in [Table 4](#) Panel A for the full sample. In the South Korean context, the market plays a pivotal role, particularly in a developed market like KRX. The coefficient of DHHI moderately affects AEM, with coefficient = -0.135 and t -value = -2.795 . [H1](#) is not supported.

The higher the emphasis on CL, the greater the propensity for engaging in AEM. This is consistent with the proposed [H2a](#). Firms with a differentiation strategy decrease the practice of AEM, as indicated by a coefficient of -0.135 and a t -value of -2.795 . The findings of our study provide evidence in favor of [H2b](#).

Independent variables	Dependent variable: AEM		
	(1) Full sample Coeff (<i>t</i> -value)	(2) Profit firms Coeff (<i>t</i> -value)	(3) Loss firms Coeff (<i>t</i> -value)
C	-0.768*** (-5.016)	-0.733*** (-3.711)	0.093 (0.369)
DHHI	-0.016* (-1.386)	-0.024* (-1.501)	0.004 (0.136)
CL	0.017** (1.663)	0.008 (0.653)	0.030 (1.029)
Diff	-0.135*** (-2.795)	-0.257*** (-3.658)	-0.229*** (-2.335)
DHHI × CL	0.002 (0.219)	0.003 (0.268)	0.009 (0.337)
DHHI × Diff	0.117*** (2.477)	0.156*** (2.355)	0.248*** (2.561)
SHARE	-0.357*** (-6.440)	-0.398*** (-6.517)	0.038 (0.248)
SIZE	0.029*** (5.289)	0.029*** (4.052)	-0.004 (-0.464)
LEV	0.023* (1.390)	0.024 (1.000)	0.051** (2.089)
GROWTH	0.004* (1.314)	0.000 (0.063)	0.012*** (2.341)
Adjusted R^2	0.267	0.330	0.206
<i>F</i> -statistic	2.506	2.680	1.549
DW	2.195	2.307	3.796
Fixed Effect	Yes	Yes	Yes
<i>N</i>	3,256	2,501	755

Note(s): *, **, *** indicates significance at the level of 10, 5 and 1%, respectively. One-tailed test

Source(s): Table created by authors

Table 4.
Regression result –
South Korea

DHHI does not demonstrate a statistically significant role for CL, H3a is not supported. Nevertheless, DHHI served as a mediator in the association between Diff and AEM. Companies that adopt a differentiation strategy often engage in AEM in a fiercely competitive business environment. This result supports our H3b.

The findings in Table 4 Column (2) mirror those observed in full sample. Companies are less likely to manipulate earnings as competition increases. The DHHI continues to demonstrate its ability to moderate the Diff and AEM relationships. SHARE appears to be a significant factor, with higher market share correlating with a decreased propensity to engage in AEM. Whereas SIZE continues to positively impact the propensity for AEM.

In Table 4 Column (3), the study investigated firms experiencing losses and revealed consistent results regarding the correlation between Diff and AEM. Moreover, when assessing DHHI alongside Diff, the analysis indicated that firms employing a differentiated strategy tend to engage in more earnings management when operating within highly competitive markets. Interestingly, SHARE ceased to be a significant factor in earnings management within these loss firms.

4.2 Additional analysis

After examining the impact of dependent and independent variables for each country, we also analyze universal analysis by combining the samples of both countries, Indonesia and South Korea, to validate the primary findings. The results are depicted in Table 5.

Dependent variable: AEM			
Independent variables	(1) Market competition and business strategy	(2) Country and business strategy	(3) Market competition, country, and business strategy
	Coeff. (t-value)	Coeff. (t-value)	Coeff. (t-value)
C	0.130*** (6.851)	0.168*** (8.242)	0.159*** (6.494)
DHHI	-0.010** (-1.764)	-0.038*** (-4.088)	-0.035** (-2.056)
CL	0.009*** (2.581)	-0.008** (-1.676)	-0.032*** (-2.597)
Diff	0.034** (2.166)	0.056** (2.264)	0.416*** (7.993)
DHHI × CL	0.010*** (2.500)	0.014*** (3.501)	0.042*** (3.248)
DHHI × Diff	-0.028* (-1.492)	-0.028* (-1.448)	-0.443*** (-7.989)
DCOUNTRY	0.049*** (15.500)	0.004 (0.397)	0.005 (0.302)
DCOUNTRY × DHHI		0.031*** (3.339)	0.031** (1.690)
DCOUNTRY × CL		0.019*** (4.780)	0.047*** (3.661)
DCOUNTRY × DIFF		-0.028* (-1.357)	-0.429*** (-7.883)
DCOUNTRY × CL × DHHI			-0.033*** (-2.484)
DCOUNTRY × Diff × DHHI			0.476*** (8.085)
SHARE	0.052* (1.625)	0.018 (0.547)	-0.001 (-0.020)
SIZE	-0.003*** (-5.144)	-0.003*** (-5.145)	-0.003*** (-4.917)
LEV	-0.004 (-0.833)	-0.003 (-0.517)	-0.003 (-0.622)
GROWTH	0.020*** (7.994)	0.020*** (8.055)	0.021*** (8.275)
Adjusted R ²	0.084	0.089	0.101
F-statistic	54.372	44.770	44.628
DW	1.405	1.416	1.452
Fixed Effect	Yes	Yes	Yes
N	5,854	5,854	5,854

Table 5. Regression result – Indonesia and South Korea

Note(s): *, **, *** indicates significance at the level of 10, 5 and 1%, respectively. One-tailed test DCOUNTRY = 1 for IDX data and 0 for KRX data

Source(s): Table created by authors

Based on an analysis of Table 5, Column (1) presents evidence of regression analysis by merging both countries ($N = 5,854$ firm-years) using the addition of a new variable called DCOUNTRY, which has a binary representation: 1 for Indonesia ($N = 2,598$ firm-years) and 0 for South Korea ($N = 3,256$ firm-years). It is evident that there exists a distinction in AEM between IDX and KRX, with IDX exhibiting higher levels of AEM compared to KRX. The coefficient of DCOUNTRY is 0.049 and significant at 1% level. In Table 5 Column (1) and (2), we interact DCOUNTRY and studied independent variables (DHHI, CL and Diff). The results

show an insignificant impact on DCOUNTRY because the variance of AEM is transferred to the interaction between DCOUNTRY and DHHI, CL and Diff.

By combining data from both countries, Table 5 Column (1) presents the negative relation between DHHI and AEM, which is significant at a 1% level, so H1 is not supported. The results in Column (2) and (3) conclude the same phenomenon.

In testing H2 using full samples from both countries, we find that CL and Diff both positively affect AEM. H2a is supported, but not for H2b. In Column (1), the coefficients of CL and Diff are 0.009 and 0.034, respectively, and significant at the 1% level. But when we introduce DCOUNTRY as the moderator in Column (2) and (3), we see that CL negatively impacts AEM, while Diff continues to show a positive impact on AEM.

Table 5 Column (2), adds new variables that modify DCOUNTRY. $DCOUNTRY \times DHHI$ shows positive and statistically significant effects on AEM, showing that the impact of competition on earnings management is greater in Indonesia. At the 1% level, the coefficient $DCOUNTRY \times CL$ is 0.019, which is statistically significant. These findings show that although cost leadership increases earnings management in both countries, the effect is greater for companies in Indonesia. On the contrary, the coefficient of $DCOUNTRY \times Diff$ is -0.028 and significant at the 10% level, indicating that the effect of a differentiator on earnings management is greater in KRX than in IDX. These findings support our previous tests for each country.

In Table 5 Column (3) DCOUNTRY is presented as a moderating factor for market competition (DHHI) and business strategy. With the same result as Column (2), the degree of earnings management for cost leadership firms in IDX is stronger than that of KRX (coeff. $DCOUNTRY \times CL = 0.047$ and significant at 1% level). On the other hand, differentiation strategy has a greater impact on earnings management in South Korea than in Indonesia (coeff. $DCOUNTRY \times Diff = -0.429$ and significant at 1% level).

Looking at our regression results, we have the same outcome after analyzing the empirical data that Herusetya *et al.* (2023) provided. They also discovered that the use of AEM techniques depends on each company's particular business strategy. According to their research, companies that adopt a defender-type business strategy, which is similar to cost leadership, generally demonstrate higher levels of AEM than those that employ prospector or differentiation strategies. Nevertheless, the impact of this influence can vary based on the degree of market rivalry, the state of firm profitability, and the characteristics of the capital market.

4.3 Robustness test

We also perform robustness checks using the absolute value of total accruals (Abs_TAC). Total accruals (TAC) are derived by subtracting operating cash flow from net income from the current period. The results are untabulated. $DHHI \times CL$ has adverse effect on Abs_TAC for IDX sample. Meanwhile, LEV and GROWTH have a positive and significant effect on Abs_TAC, which aligns with the findings from our previous investigations.

Using the KRX sample, our test provides evidence that H1 and H2a are supported for loss firms. We also find that the interaction between DHHI and CL negatively affects Abs_TAC. Although the impact is significant, the direction is on the contrary with H3a. Based on the findings, it is evident that the results we obtained are not yet robust and are influenced by the proxies used in earnings management. Nevertheless, we believe that AEM measurement using Kothari Model surpasses Abs_TAC because of its novelty, its consideration of the accrual component under managerial discretion, and its consideration of the cross-sectional effect of other firms in the same industry.

4.4 Discussion

The findings show that market competition in Indonesia and South Korea affects a company's decision to conduct earnings management. Higher competition fosters greater

transparency. This enhanced transparency empowers stakeholders to more effectively scrutinize a company's financial practices, thereby making it increasingly challenging to conceal earnings management maneuvers (Holmstorm, 1982). This finding has significant implications for financial analysts and stakeholders, as it underscores the importance of vigilance in the face of increasing competition.

The chosen business strategy significantly influences a company's decision to increase or decrease the propensity for conducting earnings management. As affirmed by Wu *et al.* (2015), the adoption of a cost leadership strategy is positively correlated with the extent of earnings management, a conclusion that aligns with our findings in Indonesia and South Korea. However, it is noteworthy that the implementation of a differentiation strategy demonstrates a negative association with the level of earnings management only for the South Korean sample, indicating that differentiators face less external pressure to manage earnings. Nevertheless, it does not demonstrate any significant effect on earnings management for the Indonesian sample.

Fascinating insights emerged when examining the moderating influence of market competition on the relationship between business strategies and the extent of earnings management in these two nations. Our analysis reveals that market competition serves as a moderating variable in Indonesia and South Korea. The adoption of a cost leadership strategy tends to increase the inclination toward earnings management in Indonesia, while the differentiation strategy increases earnings management in both countries. Our findings enrich the results of previous studies. When we analyze the relationship between industrial rivalry, business strategy, and earnings management, we observe that the impact of each factor on earnings management can differ among countries.

Moreover, higher market share is associated with reduced AEM in KRX. Due to the higher degree of competition in South Korea, a company with a high market share faces significant monitoring pressure from larger financial statement readers, making it less likely to engage in aggressive financial reporting. Additionally, factors such as firm size, leverage, and growth positively influence the extent of earnings management in both countries.

5. Conclusions

The research outcomes clearly underscore the significant role played by business strategy in shaping earnings management practices and this holds true for both Indonesia and South Korea. However, it is essential to recognize that the interaction between industry competition intensity and business strategy exhibits a few distinct patterns across the two countries' stock exchanges.

Notably, the influence of business strategy on earnings management varies among firms that are experiencing losses and those that are profitable. This variance in behavior highlights the complexity of earnings management practices, which can be influenced by a multitude of factors, including market conditions, corporate strategies, and financial performance. These insights shed light on the intricate interplay of business strategies and competitive environments in two diverse economic landscapes, providing valuable guidance for policymakers, investors and business leaders seeking to understand and manage earnings management behaviors effectively.

Our research makes several significant theoretical contributions to the existing body of knowledge. First and foremost, we provide empirical evidence that firms employing different business strategies indeed exhibit varying degrees of earnings management. This new understanding broadens the field of study on earnings management and clarifies the critical function of business strategy as a primary driver of these practices. In addition, our study deviates from the conventional emphasis on corporate governance elements by including business strategy as a variable of explanation. This departure highlights the importance of operational approach factors for a company when making management decisions about earnings management, highlighting the need for more academic research in this area.

This study also offers practical implications for both managers and investors. The findings suggest that managers should consider the degree of rivalry within the industry when selecting a suitable business strategy since this decision will impact the earnings management strategy they must adopt. Investors may use the results of this study to assess the quality of a company's earnings. The findings can provide valuable guidance for investors in designing their investment strategies.

However, it is essential to understand the limitations of this investigation. As they offer significant suggestions for subsequent research undertakings. Future research could look into other AEM approaches and also consider REM, to improve the results' robustness. Further insights may also be obtained by investigating various business strategy typologies, such as the one put forth by Miles *et al.* (1978), which classifies companies as prospectors, defenders, analyzers, and reactors. Ultimately, to better understand how business strategy affects earnings management techniques, it may be helpful to consider entrepreneurial traits when exploring the field of business strategy.

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Corresponding author

Felizia Arni Rudiawarni can be contacted at: felizia@staff.ubaya.ac.id