



EARNINGS MANAGEMENT AND TAX MINIMIZATION: COMPREHENSIVE ANALYSIS OF BOOK-TAX DIFFERENCES IN INDONESIA

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Abstract

The research aims to investigate the relationship between earnings management strategies, specifically Accrual Earnings Management (AEM) and Real Earnings Management (REM), and abnormal book-tax differences (ABTD). A quantitative approach was employed, utilizing multiple regression models, descriptive statistics, model testing, classical assumption testing, and hypothesis testing through Eviews 12 software on a sample of 671 observations from 61 companies listed on the IDX from 2011 to 2021. The results reveal a significant positive relationship between ABTD and both AEM and REM through overproduction. However, no significant relationship was found between REM and abnormal operating cash flow. Interestingly, a strong negative correlation was discovered between tax avoidance and earnings management through discretionary spending. These findings suggest that accrual management practices are associated with higher levels of tax avoidance, while discretionary spending for earnings management tends to decrease it. The implications of this study provide insights into potential earnings management techniques that can enhance corporate efforts to reduce tax payments and maximize profits while serving as a warning for potential tax avoidance activities.

Keywords: Abnormal book-tax differences; Accrual earning management; Book-tax differences; Real earning management.

Abstrak

Penelitian ini bertujuan untuk menyelidiki hubungan antara strategi manajemen laba, khususnya Manajemen Laba Akruan (AEM) dan Manajemen Laba Riil (REM), dengan perbedaan buku-pajak abnormal (ABTD). Pendekatan kuantitatif diterapkan dengan menggunakan model regresi berganda, statistik deskriptif, pengujian model, pengujian asumsi klasik, dan pengujian hipotesis melalui perangkat lunak Eviews 12 pada 671 sampel dari 61 perusahaan yang terdaftar di IDX dari tahun 2011 hingga 2021. Hasil penelitian menunjukkan adanya hubungan positif yang signifikan antara ABTD dan kedua AEM dan REM melalui overproduction. Namun, tidak ditemukan hubungan signifikan antara REM dan aliran kas operasional abnormal. Secara menarik, ditemukan korelasi negatif yang kuat antara penghindaran pajak dan manajemen laba melalui belanja diskresioner. Temuan ini mengindikasikan bahwa praktik manajemen akrual terkait dengan tingkat penghindaran pajak yang lebih tinggi, sementara pengeluaran diskresioner yang digunakan untuk manajemen laba cenderung menurunkan tingkat penghindaran pajak tersebut. Implikasi dari penelitian ini memberikan wawasan tentang teknik potensial dalam manajemen laba yang dapat meningkatkan upaya perusahaan dalam mengurangi pembayaran pajak dan memaksimalkan laba, serta memberikan peringatan terhadap potensi aktivitas penghindaran pajak.

Kata Kunci: Abnormal book-tax differences; Book-tax differences; Manajemen laba akrual; Manajemen laba riil.

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INTRODUCTION

Tax avoidance is a widespread problem that affects not only Indonesia but countries all around the world. It leads to governments losing a significant amount of money in tax revenue. Just the tax avoidance by corporations itself accounts for 57% of the total global tax loss. This means that governments worldwide are missing out on a massive amount of money, estimated to be around US\$427 billion every year (Tax Justice Network, 2020). In Indonesia, companies recorded significant tax avoidance amounts, highlighting the urgency to address this issue comprehensively. Detecting and combatting corporate tax avoidance requires meticulous scrutiny of financial reports to uncover irregularities and anomalies (Hanlon, 2003). Sadly, the trustworthiness of these reports is often compromised by the presence of asymmetric information arising from management's discretionary actions.

In their effort to manage earnings and reduce taxes, managers use creative accounting methods and strategies to avoid paying taxes. (Schroeder et al., 2009). Deciding whether to manage earnings or engage in tax avoidance involves considering the advantages and disadvantages of each option (Geraldina, 2013). As a result, researchers have put a lot of effort into studying the complex relationship between earnings management and tax avoidance. They want to find out if these two practices are separate and cannot happen at the same time, or if they can work together in a balanced way (Frank et al., 2009).

This field of research has become more important because managers increasingly adopting earnings management activities as strategies to navigate regulatory changes and meet the demands of dynamic business environments (Brooks, 2011). While earlier earnings management practices primarily focused on accrual activities, the landscape has evolved due to stricter regulations and intensified business competitiveness (Deegan, 2014). Managers have started using real earnings management in addition to accruals to achieve their goals.

As regulators work to address advanced tax avoidance strategies, there is a growing need to investigate real earnings management alongside accrual-based practices (Delgado et al, 2023). By delving into both accrual and real earnings management, researchers aim to unravel the underlying motivations and mechanisms driving the choice between these strategies in the context of tax avoidance (Herusetya & Stefani, 2020). It is important to understand the reasons behind this decision-making process to create effective solutions and ensure a fair and transparent tax system (Kiser & Karceski, 2017).

Different ways of measuring and identifying earnings management have been created to effectively spot it. These methods include looking at both accrual-based and real earnings management approaches. Accrual earnings management can be measured by looking at discretionary accruals. These discretionary accruals help identify unusual situations in accrual earnings that happen because of what the managers do (Belkaoui, 2007). Measurement models such as the Jones model (1991) and the Modified-Jones model (1995) have been commonly utilized to identify accrual earnings management. On the

other hand, real earnings management is measured by capturing abnormal deviations from normal earnings, using approaches like the Roychowdhury model (2006) and the Cohen & Zarowin model (2010).

To ensure precise measurement of tax avoidance, proxies such as the abnormal book-tax difference (ABTD) have been developed. ABTD indicates the comprehensive level of tax avoidance that cannot be accounted for by the discrepancy between accounting and tax earnings (Tang & Firth, 2011). Furthermore, researchers have explored the factors influencing the choice between accrual and real earnings management concerning tax avoidance, considering control variables such as firm growth, leverage level, firm size, pretax return on assets, and the presence of foreign operations. These variables have been identified as influential factors impacting the choice between accrual and real earnings management as well as tax avoidance practices. Previous studies indicate that high-growth and highly leveraged companies are more inclined to engage in tax avoidance, while larger companies are also more likely to be involved (Lyon, 2014) (Dechow et al., 2010) (Beneish, 1999). Moreover, as profitability increases, companies tend to adopt both earnings management and tax avoidance strategies (Ginting & Martani, 2017).

In line with the existing body of research, this study aims to replicate and build upon the investigation conducted by Frank et al. (2009) while introducing new things or ideas. The replication provides an opportunity to validate and extend the findings of the previous study, which helps to gather more knowledge in this field. One significant aspect of this study involves replacing the measurement of accrual earnings management (AEM) utilized by Frank et al. (2009). Instead of employing the Jones model (1991), we adopt the Kothari et al. (2005) model to assess AEM. The Kothari et al. model offers a more updated and refined approach to measuring accrual earnings management, accounting for contemporary considerations and advancements in the field. By using this alternative model, we can evaluate the relationship between AEM and tax avoidance with a fresh perspective, potentially uncovering new insights.

Moreover, this study incorporates a measure of real earnings management (REM) based on the Cohen & Zarowin model (2010). By introducing REM as an additional dimension of analysis, we expand the scope of investigation and capture a comprehensive view of earnings management practices in relation to tax avoidance. The Cohen & Zarowin (2010) model provides a robust framework for identifying abnormal deviations from normal earnings, enabling a deeper understanding of the interplay between REM, AEM, and tax avoidance.

Given the global prevalence of tax avoidance and its significant impact on revenue losses, it is crucial to explore the factors influencing the choice between accrual and real earnings management concerning tax avoidance. To examine these factors, our study includes different factors that we use to compare and analyze the data. These factors include firm growth, the amount of debt it has (leverage level), how big the company is (firm size), how well it performs financially before taxes (pretax return on assets), and whether it has operations in other countries (foreign operations).

Through a meticulous analysis of the relationship between these variables and the selection of accrual or real earnings management, our research aims to provide valuable insights for regulators, practitioners, and policymakers. By understanding these factors,

researchers can effectively tackle the problems related to corporate tax avoidance, especially in manufacturing companies. Previous studies have shown that manufacturing companies are more likely to be involved in activities like earnings management and tax avoidance compared to companies in other industries (Roychowdhury, 2006; Surahman & Firmansyah, 2017; Herusetya & Stefani, 2020; Masri, 2022).

Considering the critical nature of the challenges posed by corporate tax avoidance, this study aims to add to the existing research and offer valuable insights that can help regulators, professionals, and policymakers address these issues more effectively. Through an analysis of the relationship between AEM, REM, and ABTD, while incorporating control variables, our research holds the potential to shed light on effective strategies and approaches for mitigating the problems associated with corporate tax avoidance. The results of this study can provide useful advice and help shape policies to reduce tax avoidance practices. This, in turn, can promote fair and transparent tax systems that support economic stability and integrity.

LITERATURE REVIEW

Inductive Positive Approach

The positive inductive approach is a research methodology employed in both accounting policies and earnings management theory to study and comprehend the practices and phenomena within companies (Zalaghi & Kazei, 2016). When applied in accounting research, this approach aims to explain the various accounting policies adopted by companies and elucidate the relationship between these policies and management decisions (Nangih et al, 2021). It acknowledges that accounting rules are not picked randomly. Instead, they are chosen after careful thinking and consideration. This involves testing to see if they are practical and possible, observing how they work in practice, and making sure they are accurate and reliable (Belkaoui, 2007). By utilizing the positive inductive approach, researchers seek to interpret and describe the underlying elements of accounting systems and phenomena in the context of business enterprises (Nasution et al, 2020). In the study of earnings management, there is a method called the positive inductive approach. This approach focuses on understanding how earnings management works by looking at real examples. Earnings management means intentionally changing financial statements to make earnings look different (Brennan, 2021). Following the principles of positivism and induction, researchers gather empirical data such as financial statements, corporate disclosures, and relevant information to analyze and interpret (Björman & Weiheggen, 2013). Through this analysis, researchers endeavor to formulate general theories and explanations about the factors that drive earnings management practices in companies. The primary objective of the positive inductive approach in earnings management theory is to comprehend the motivations, strategies, and outcomes of these activities (Jiang, 2020).

A fundamental element of the positive inductive approach is understanding the logical connection between earnings management and tax avoidance (Almeshref et al, 2020). Earnings management, which involves intentional modifications to financial statements, can be driven by various motivations, one of which may be tax avoidance. By legally reducing tax liabilities, companies can improve their financial performance, a potential

result of strategic earnings management. Therefore, the positive inductive approach focuses on investigating these motivations and the outcomes of such decisions.

Earnings Management

Earnings management is when managers use their own judgment and make decisions to achieve specific accounting goals and improve how well the company is doing. They do this by using financial systems and following rules to report the company's financial information (Ronen & Yaari, 2008; Manuela et al., 2022). Managers are often offered rewards like extra money or the chance to buy company stocks at a lower price to motivate them to participate in earnings management activities (Kothari et al., 2005). There are different reasons why companies engage in earnings management. They do it to meet expectations from others, to keep a good reputation, and to make sure they can keep their jobs. Additionally, it can benefit companies by helping them get lower costs for borrowing money, attracting loans, and staying within the limits set for their debts (Francis et al., 2022). Even though earnings management can bring some advantages, especially in the short term, being too aggressive with these practices can cause ethical and rule-related problems. This can harm the accuracy of financial reports and give stakeholders the wrong idea about the company (Brooks, 2011). Managers need to understand and deal with these ethical problems, as well as meet their responsibilities to different groups involved. Ethical issues come up when managers use tricks to manage earnings that don't show the real performance of the company. When they make earnings look bigger or smaller than they really are, or control how much they go up and down, it can lead to wrong information being given and understood in financial reports (Subramanyam, 2014).

Accrual Earnings Management (AEM)

When managers make decisions about earnings management, they choose methods, practices, and policies that match the company's goals and strategies. Their main goal is to get the results they want in accounting. Sometimes, managers might choose different ways of doing accounting that are not allowed by the rules. They might do this because they want to benefit themselves personally, even if it goes against the regulations (Frank et al., 2009). It is important to know that these different ways of doing accounting can introduce unfairness and not follow the rules. This can make the financial reports not trustworthy. One common way managers manage earnings is by using accruals (Dechow & Kothari, 1998). Accrual accounting means recording income and expenses when they happen, even if the money hasn't been paid or received yet. Managers can use accruals to control how much profit the company shows and change the numbers on the statement of financial position, which keeps track of what the company owns and owes (Deegan, 2014). Even though accruals don't directly impact the money coming in or going out, they do have a big influence on the numbers shown as earnings or earnings in the financial reports (Ronen & Yaari, 2008). People usually think that the way earnings are managed doesn't have much impact on the money that comes in or goes out. But in situations where there is a lot of competition and risks, managers might feel pressured to do actual cash transactions that match the earnings they want to show (Francis et al., 2022). These transactions may have a genuine impact on cash flows, emphasizing the interconnectedness between reported earnings and real cash movements.

Real Earnings Management (REM)

Real earnings management is different from using accruals. It's about recording real transactions to manage earnings. Instead of making guesses or estimates, managers focus on the actual money coming in and going out of the company (Roychowdhury, 2006). Managers are sometimes unsure if they are allowed to do certain transactions. By looking at the money they receive from sales and the money they pay for expenses, they can see the real activities happening in the company (Brigham & Ehrhardt, 2010). Managers often feel unsure if they are allowed to do certain transactions. They can understand the real activities of the company by looking at the money they receive from sales and the money they spend on expenses (Alves, 2021). Transactions can be grouped into those related to sales, those related to expenses, or sometimes both. Here are some examples of different things managers might do: They might sell an asset and record it as a profit, and then lease it back. They could also do something called "channel stuffing," which means putting extra products into the distribution system to make sales look higher (Gujarathi & Dugar, 2020). Managers can also adjust unusual expenses in a way that benefits them or make the costs of running the company seem higher by producing more things. There are also transactions that don't show up on the regular financial statements, but still affect sales and expenses (Ronen & Yaari, 2008). Managers can sometimes change when they recognize revenue (money coming in) or expenses (money going out) to make it seem like the transactions happened later or earlier. They do this to control when the money shows up in the company's financial records.

Tax Avoidance

People have different opinions about tax avoidance, which means finding ways to legally pay less in taxes (Barker, 2017). Scholars study whether it is allowed by law and how it affects how efficiently taxes are collected. Even though companies like it when they have to pay less in taxes, taxes are still important because they help the government pay for things that benefit everyone, like public services, helping people with lower incomes, and keeping the economy stable (Wang, 2022). Tax avoidance is when people use their rights and follow certain rules to legally pay less in taxes (Braithwaite, 2017). These rules include things like delaying the payment of taxes, getting different treatment depending on how much money someone earns, and having reasons for why they earn money in different ways. Deferring taxes can be beneficial because it allows for the value of money to increase over time. Taking advantage of lower tax brackets can be seen as using loopholes to pay fewer taxes. Different reasons for how taxes are calculated can encourage the use of structures that result in lower tax rates. OECD in IESBA Tax Planning and Related Services Working Group, (2021) defines tax avoidance as when people make plans or arrangements to make their taxes more efficient. This means finding ways to legally pay less in taxes by taking advantage of different rules and strategies. This includes making plans, choosing the right kind of business structure, making decisions about how to finance things, and having a good understanding of the tax laws and rules that apply. Managers also use different strategies to handle taxes, like saving money, following the rules, delaying payments, and making the most of tax credits available to them (Hughes, 2009). Some examples of these strategies include moving earnings to places with lower taxes, using countries with special tax advantages, and adjusting the prices when buying and selling things between companies that are connected to each other.

Abnormal Book-Tax Difference (ABTD)

The book-tax difference (BTD) is the gap or difference between the earnings shown in a company's accounting records and the earnings used for calculating taxes. This difference can happen because the rules for accounting and taxes don't always match up perfectly, and because some companies try to manage their earnings or find ways to pay less in taxes. This was reinforced by research by Tang & Firth (2011) with a sample of company research in China. The findings of this study showed that the BTD is made up of two main parts: regulatory differences and deliberate actions taken by companies to take advantage of opportunities. Regulatory differences happen when the rules for accounting and tax calculations are not the same. These differences account for about 77% of the BTD. The remaining 33% that cannot be explained is another type of difference called ABTD. ABTD is caused by actions such as earning management when companies manage their reported earnings and tax avoidance when companies try to minimize their tax payments. It can also occur when these two factors interact with each other (Tang, 2020).

Table 1. Previous Research

No	Previous Research	Research Result	Tax Avoidance Proxy	Earning Management Proxy
1.	Frank et al. (2009)	Partial positive relationship between Earning Management (EM) and Tax Avoidance (TA)	DTAX	Accrual modified-jones (1995) No real variable
2.	Morais & Macedo (2021)	Partial positive relationship of EM with TA	ABTD	Accrual modified-jones (1995) <i>Real</i> (Roychowdhury, 2006)
3.	Herusetya & Stefani (2020)	Partial positive relationship of EM with TA	<i>Tax Shelter</i>	<i>Accrual</i> (Kothari et al., 2005) <i>Real</i> (Roychowdhury, 2006)
4.	Masri (2022)	Partial positive relationship of EM with TA	BTD ABTD	<i>Accrual</i> (Kothari et al., 2005) <i>Real</i> (Roychowdhury, 2006)
5.	Surahman & Firmansyah (2017)	Partial positive relationship of EM with TA	BTD	<i>Accrual</i> (Kothari et al., 2005) <i>Real</i> (Roychowdhury, 2006)

Source: Processed by the author.

Hypotheses Development

Companies, according to the inductive positive approach, strategically exploit disparities between accounting and tax regulations to boost their earnings and curtail tax obligations. This strategy manifests as a book-tax gap in their financial statements. Previous research lends support to this theory. Frank et al. (2009) demonstrated a growing disparity between earnings reported to shareholders and tax earnings reported to authorities in the United States between 1990 and 2000. This disparity is often due to Accrual Earnings Management (AEM) strategies, where companies manipulate accruals in their accounting practices (Hanlon & Heitzman, 2010). Further supporting this theory, Morais and Macedo (2021) suggest that companies engaging in AEM activities are likely to have a larger disparity between their reported book earnings and tax earnings, resulting in a higher Abnormal Book-Tax Difference (ABTD). Ginting & Martani (2017) also indicate that

companies with higher ABTD are more likely to engage in practices that manage accruals to inflate reported book earnings. Based on this theoretical framework and the empirical evidence from previous research, we propose the following hypotheses:

H₁: Accrual earning management (AEM) has a positive relationship to the abnormal book-tax difference (ABTD).

H₃: Abnormal book-tax difference (ABTD) has a positive relationship to accrual earning management (AEM).

Earnings management theory discusses how managers use judgement in financial reporting and in structuring transactions to influence contractual outcomes that depend on reported accounting numbers. In addition to using accruals, earnings management also includes optimizing profit levels through real business activities. Cohen and Zarowin (2010) suggest that making real changes in their operations can be used to manage their earnings, just like companies do with accruals. However, these kinds of actions are not as common and are not likely to happen as often. According to Roychowdhury (2006), one important thing companies do to manage their earnings is control their sales. This can lead to unusual patterns in the money coming in and going out of the business. When companies purposefully make their sales appear higher than they truly are, it makes their profit reports look bigger than they should be. This can also allow businesses to report taxable income on money they haven't actually earned yet. By intentionally generating abnormal cash flow patterns, companies can inflate their reported earnings, leading to a larger ABTD. This practice allows them to show higher earnings to shareholders while potentially paying less in taxes to the government. Morais & Macedo (2021) suggest that managing the cash flow from day-to-day business operations can cause differences in the earnings they report for accounting and tax purposes. By intentionally generating abnormal cash flow patterns, companies can make their reported earnings appear bigger than they actually are, leading to a larger ABTD. This way of managing allows companies to show higher earnings to shareholders while potentially paying less in taxes to the government. Furthermore, when there is a higher ABTD, it means a larger difference between the earnings reported for accounting purposes and the earnings reported for tax purposes. This difference provides an opportunity for companies to engage in real earnings management practices. Based on this theory and previous research, we hypothesize:

H_{2a}: Real earning management (REM) through abnormal cash flow from operations has a positive relationship to the abnormal book-tax difference (ABTD).

H_{4a}: Abnormal book-tax difference (ABTD) has a positive relationship to real earning management (REM) through abnormal cash flow from operations.

According to Roychowdhury (2006), when a company purposely overproduction means produces more goods than needed, it can lower the cost of producing those goods. This can result in higher earnings for the company because the cost of goods sold is reduced. When a company intentionally produces more goods than necessary, it can increase its reported earnings. This abnormal practice can also create a chance to avoid paying taxes by reducing taxable income, as the reported production exceeds the actual output (Herusetya & Stefani, 2020). Moreover, When the ABTD is higher, it suggests that companies are producing more goods than needed in order to make their earnings seem larger (Surahman & Firmansyah, 2017).

H_{2b}: Real earning management (REM) through overproduction has a positive relationship to the abnormal book-tax difference (ABTD).

H_{4b}: Abnormal book-tax difference (ABTD) has a positive relationship to real earning management (REM) through overproduction.

Cohen and Zarowin (2010) suggests that companies engage in real transactions for earning management when they save money on discretionary expenses that are not immediately benefit to create income and earnings. In simpler terms, real transactions for earning management happen when companies find ways to save money. When companies reduce costs that are optional or can be avoided, it helps to increase their earnings. Additionally, managers can choose to subtract expenses from their taxable income as allowed by regulations. Surahman & Firmansyah (2017) suggest that when companies engage in REM through discretionary expenses, it can create a larger gap between accounting and tax profit, this gap arises due to the differential treatment of expenses or deferring expenses for tax purposes. So that companies can potentially reduce their tax liabilities and report lower taxable income. Moreover, higher ABTD indicating a larger gap between reported earnings and taxable income, this larger gap can affect the use of discretionary expenses in managing their taxable income.

H_{2c}: Real earning management (REM) through discretionary expenses has a positive relationship to the abnormal book-tax difference (ABTD).

H_{4c}: Abnormal book-tax difference (ABTD) has a positive relationship to real earning management (REM) through discretionary expenses.

RESEARCH METHOD

The research methodology section of this study gives a brief explanation of how the study was done. It outlines about important things like who or what the study looked at, where the information came from, and how the information was analyzed. It also highlights about the research model that was made to answer the research questions and explains the different things that were studied. Finally, it mentions the method used to analyze the information and find important results.

Population, Sample, and Data

For this study, we used information that was secondary data. This data was obtained from the financial reports of manufacturing companies that are listed on the Indonesia Stock Exchange. We looked at the reports from the years 2011 to 2021 to get our data. However, we didn't include information from companies that started selling their shares to the public after January 1, 2011. We also didn't include companies that didn't have information about their taxes for the current year. We wanted to focus on companies that had a complete set of data for our study.

Table 2. Data Research Results with Purposive Sampling

No	Description	Total
1	Population of manufacturing companies in the sub-sectors of basic materials, industrial goods, tobacco, automobile and components, pharmaceutical and healthcare research, and food and beverages on the Indonesia Stock Exchange	248
Exclude		
2	Companies that went IPO after January 1, 2011	(115)
3	Between the period 2011-2021 reported having no tax burden for the current year	(72)
	Research Sample	61
	Number of Years (2011-2021)	11
	Total Sample Observation	671

Source: Processed by the author.

Research Model

The research model to answer research problems as well as test hypotheses 1, 2a, 2b, and 2c are:

$$ABTD_{it} = \beta_0 + \beta_1 AEM_{it} + \beta_2 GROWTH_{it} + \beta_3 LEV_{it} + \beta_4 SIZE_i + \beta_5 PTROA_{it} + \beta_6 FOR_D_{it} + \varepsilon_{it} \quad (1)$$

$$ABTD_{it} = \beta_0 + \beta_1 REM_CFO_{it} + \beta_2 GROWTH_{it} + \beta_3 LEV_{it} + \beta_4 SIZE_i + \beta_5 PTROA_{it} + \beta_6 FOR_D_{it} + \varepsilon_{it} \quad (2a)$$

$$ABTD_{it} = \beta_0 + \beta_1 REM_PROD_{it} + \beta_2 GROWTH_{it} + \beta_3 LEV_{it} + \beta_4 SIZE_i + \beta_5 PTROA_{it} + \beta_6 FOR_D_{it} + \varepsilon_{it} \quad (2b)$$

$$ABTD_{it} = \beta_0 + \beta_1 REM_EXP_{it} + \beta_2 GROWTH_{it} + \beta_3 LEV_{it} + \beta_4 SIZE_i + \beta_5 PTROA_{it} + \beta_6 FOR_D_{it} + \varepsilon_{it} \quad (2c)$$

Meanwhile, to answer and test hypotheses 3, 4a, 4b, and 4c, the research model used are:

$$AEM_{it} = \beta_0 + \beta_1 ABTD_{it} + \beta_2 GROWTH_{it} + \beta_3 LEV_{it} + \beta_4 SIZE_i + \beta_5 PTROA_{it} + \beta_6 FOR_D_{it} + \varepsilon_{it} \quad (3)$$

$$REM_CFO_{it} = \beta_0 + \beta_1 ABTD_{it} + \beta_2 GROWTH_{it} + \beta_3 LEV_{it} + \beta_4 SIZE_i + \beta_5 PTROA_{it} + \beta_6 FOR_D_{it} + \varepsilon_{it} \quad (4a)$$

$$REM_PROD_{it} = \beta_0 + \beta_1 ABTD_{it} + \beta_2 GROWTH_{it} + \beta_3 LEV_{it} + \beta_4 SIZE_i + \beta_5 PTROA_{it} + \beta_6 FOR_D_{it} + \varepsilon_{it} \quad (4b)$$

$$REM_EXP_{it} = \beta_0 + \beta_1 ABTD_{it} + \beta_2 GROWTH_{it} + \beta_3 LEV_{it} + \beta_4 SIZE_i + \beta_5 PTROA_{it} + \beta_6 FOR_D_{it} + \varepsilon_{it} \quad (4c)$$

$ABTD_{it}$, known as Abnormal Book-Tax Difference, is a measure used to see how companies in Indonesia manage to reduce their tax payments. It shows the difference between the earnings reported for accounting purposes and the earnings reported for tax purposes, indicating the level of tax avoidance by company i . This measure was developed by Tang and Firth (2011). The constant β_0 represents a baseline value in our analysis. AEM_{it} refers to the degree of earnings management through accruals employed by the company i . This AEM_{it} measure refers to the model by Kothari et al. (2005). REM_CFO_{it} (real earning management through abnormal cash flow from operations) represents the extent of earnings management through abnormal cash flow from operations by company i .

The REM_PROD_{it} (real earning management through overproduction) measures how much a company manipulates its earnings by producing more than necessary. It helps us understand the extent to which the company engages in overproduction to increase its reported earnings. REM_EXP_{it} (real earning management through discretionary expenses) measures the extent of earnings management through discretionary expenses implemented by the company i . Those three variables such as REM_CFO_{it} , REM_PROD_{it} , and REM_EXP_{it} are based on the real earnings management measures model by Cohen and Zarowin (2010). Additionally, we include several control variables. LEV_{it} represents the ratio of debt to total year-end assets of company i , serving as a control for financial leverage. $SIZE_{it}$ denotes the natural logarithm of total assets for company i , used as a control for firm size. $PTROA_{it}$ signifies the pretax return on assets for company i , serving as a control for profitability. FOR_D_{it} is a dummy variable indicating whether company i engages in foreign operations in Indonesia. Lastly, ε

represents the error term, accounting for unobserved factors that may influence the model's results.

Variable Operationalization

Abnormal Book Tax Difference (ABTD)

To accurately measure tax avoidance, we utilized the Tang and Firth ABTD model (2011) as our chosen method for the dependent variable. This model, widely recognized in the field, allows us to determine whether a company in question is actively engaging in tax avoidance or earning management activities (Tang & Firth, 2011).

$$BTD_{it} = \beta_0 + \beta_1 \Delta INV_{it} + \beta_2 \Delta REV_{it} + \beta_3 NOL_{it} + \beta_4 TLU_{it} + \beta_5 TAX_DIFF_{it} + \varepsilon_{it}$$

Each of those symbols are explained below: 1) BTD_{it} : This variable represents the difference between the accounting profit and tax profit reported by company i in year t . It serves as an important indicator of the extent to which a company is effectively minimizing its tax payments (Rachmawati & Martani, 2014). 2) ΔINV_{it} : Symbolizing the change in investment value, this variable measures the difference in gross tangible and intangible fixed assets between year $t-1$ and year t . It provides insights into the company's investment activities and potential impacts on tax planning strategies. 3) ΔREV_{it} : This variable captures the difference in income value for the company between year $t-1$ and year t . By examining the changes in revenue over time, we can better understand the company's financial performance and its implications for tax avoidance. 4) NOL_{it} : Referring to the net operating loss of company i in year t , this variable quantifies the extent of loss incurred by the company. It helps us assess whether the company has utilized previous losses to minimize its taxable income. 5) TLU_{it} : This variable represents the tax loss compensation value reported by company i in year t . It provides insights into the company's ability to utilize tax losses to offset taxable income and reduce tax liabilities. 6) TAX_DIFF_{it} : Signifying the difference in tax rates imposed between the parent company and its subsidiary, this variable captures variations in tax rates. It allows us to analyze the tax implications of multinational operations within the company's structure. 7) ε_{it} : This term represents the error component, specifically the ABTD of company i in year t . It accounts for unobserved factors that may influence the model's results.

Accrual Earning Management (AEM)

The way we measure AEM (accrual earnings management) is based on a method proposed by Kothari et al. in 2005. They suggested using a special equation called the residual regression of total accruals. This equation helps us calculate and understand the extent of accrual earnings management. Here is the equation we use for measuring AEM:

$$\frac{TA_{it}}{TASS_{it-1}} = \beta_0 + \beta_1 \frac{1}{TASS_{it-1}} + \beta_2 \frac{\Delta REV_{it}}{TASS_{it-1}} + \beta_3 \frac{PPE_{it}}{TASS_{it-1}} + \beta_4 \frac{ROA_{it}}{TASS_{it-1}} + \varepsilon_{it}$$

In this equation, $\frac{TA_{it}}{TASS_{it-1}}$ represents the total accruals of company i in a specific year (year t). We calculate it by subtracting company's net income, the money earned after expenses from its operating cash flow, the money coming in and going out. Then, we divide this result by the total value of the company's assets from the previous year ($TASS_{it-1}$). This

equation helps us understand the extent of changes in the company's financial position. The term $\frac{1}{TASS_{it-1}}$ represents the value of the company's total assets from the previous year (year t-1). This value is called "lagged" because it refers to assets from the past that are considered in the current equation. It helps us assess the influence of past assets on the current financial performance. Furthermore, the variable $\frac{\Delta REV_{it}}{TASS_{it-1}}$ demonstrates the relationship between changes in a company's revenue and the total value of its assets from the previous year. It helps us analyze how changes in revenue are associated with the overall value of the company's assets.

The variable $\frac{PPE_{it}}{TASS_{it-1}}$ represents the proportion of a company's assets that come from fixed things like buildings and equipment (net fixed assets) compared to its total assets from the previous year. It helps us understand the ratio of fixed assets to overall assets. It helps us understand the proportion of fixed assets a company has in relation to its overall assets. $\frac{ROA_{it}}{TASS_{it-1}}$ indicates how well a company's assets generate returns or profits in a specific year. It is the ratio of the company's return on assets to its total assets from the previous year. This ratio gives us an idea of the company's ability to utilize its assets to generate earnings. Lastly, ε_{it} refers to the unexplained value that we get from regression. It helps us measure the extent of adjustments or discretionary accruals made by a company in managing its earnings. This value captures the portion of the company's financial performance that cannot be explained by the variables included in the equation.

Real Earning Management

According to Cohen and Zarowin (2010), the value of real earning management can be determined using a set of three factors. These factors are measured based on abnormal cash flow from operations resulting from accelerated sales, increased production costs, and discretionary expenses. The mathematical formulas representing these factors are as follows:

$$\frac{CFO_{it}}{TASS_{it-1}} = \beta_1 \left(\frac{1}{TASS_{it-1}} \right) + \beta_2 \left(\frac{REV_{it}}{TASS_{it-1}} \right) + \beta_3 \left(\frac{\Delta REV_{it}}{TASS_{it-1}} \right) + \varepsilon_{it}$$

$$\frac{PROD_{it}}{TASS_{it-1}} = \beta_1 \frac{1}{TASS_{it-1}} + \beta_2 \frac{REV_{it}}{TASS_{it-1}} + \beta_3 \frac{\Delta REV_{it}}{TASS_{it-1}} + \beta_4 \frac{\Delta REV_{it-1}}{TASS_{it-1}} + \varepsilon_{it}$$

$$\frac{DISEXP_{it}}{TASS_{it-1}} = \beta_1 \left(\frac{1}{TASS_{it-1}} \right) + \beta_2 \left(\frac{REV_{it-1}}{TASS_{it-1}} \right) + \varepsilon_{it}$$

Here are detailed explanations of the variables used to understand those equations: 1)

$\frac{CFO_{it}}{TASS_{it-1}}$: Operating cash flow of company in Indonesia in particular year t, divided by total assets in previous year. 2) $\frac{PROD_{it}}{TASS_{it-1}}$: Production costs of company in Indonesia in particular year t, divided by total assets in previous year. Production costs are derived from the total cost of goods sold plus inventory. 3) $\frac{DISEXP_{it}}{TASS_{it-1}}$: Discretionary expenses of company in Indonesia in particular year t, divided by total assets in previous year. 4)

$\frac{1}{TASS_{it-1}}$: The lagged of total assets of company in Indonesia in previous year from particular year t. 5) $\frac{REV_{it}}{TASS_{it-1}}$: Total revenue of company in Indonesia in particular year t, divided by total assets in previous year. 6) $\frac{\Delta REV_{it-1}}{TASS_{it-1}}$: The change in a company's revenue in Indonesia from the year before last to the previous year is divided by the company's total assets in the previous year. 7) $\frac{REV_{it-1}}{TASS_{it-1}}$: Total revenue of company in Indonesia in previous year, divided by total assets in previous year. 8) ϵ_{it} : Represents real earnings management from each factors.

Control Variables

The growth rate of companies ($GROWTH_{it}$) is an important factor in this research. It is measured by calculating the ratio of total asset growth ($\frac{\Delta TASS_{it}}{TASS_{it}}$). Fast-growing companies often require external funding and need to reinvest their earnings to sustain their growth. Previous research by Cohen and Zarowin (2010) supports the idea that such companies may engage in earnings management and tax avoidance to meet financial demands. To control for other influences on company performance, we include leverage (LEV_{it}) as a control variable. Leverage is the level of debt a company holds, which affects performance, tax avoidance, and financial reporting. Higher levels of debt may lead companies to manage and manipulate their earnings to meet creditor demands and avoid default. Moreover, debt can reduce taxable income, thereby increasing reported earnings (Rachmawati, 2019). The size of a company ($SIZE_{it}$) is another important factor that can influence management decisions regarding earnings management and tax avoidance. Larger and more mature companies tend to be more cautious in their strategic decision-making (Rahmawati, 2019). The size is measured by taking the natural logarithm of the total assets. A higher pretax return on assets $PTROA_{it}$ indicates that a company is more likely to engage in earnings management and tax avoidance (Ginting & Martani, 2017). This variable is calculated by dividing the pretax income by total assets ($\frac{Pretax\ Income_{it}}{TASS_{it}}$). We also include a dummy variable called dummy foreign operation FOR_D_{it} to identify companies with operations or subsidiaries located outside of Indonesia. Companies with relevant records indicating foreign operations or subsidiaries are assigned a value of 1, while those operating solely within Indonesia are assigned a value of 0. This variable helps distinguish between companies with international operations and those operating only within Indonesia, providing valuable insights for the research sample.

Data Analysis Technique

In this research, different methods of analyzing data are used to ensure careful testing and accurate repetition. These techniques, including descriptive statistics, model testing, classical assumption testing, and hypothesis testing, allow for a comprehensive examination of the data. Descriptive statistics clarifies the main patterns, variations in the data, and any connections between different information. Once the data is analyzed using descriptive statistics, the next steps involve conducting additional tests. The panel model and classical assumption tests help gain a deeper understanding of the data and ensure certain assumptions are met. The panel test method aids in choosing the appropriate model among three options: the ordinary least square model (common), fixed effect model, and random effect model (Ghozali & Ratmono, 2020). This method involves

performing tests such as the Chow test, Lagrange multiplier test, and Hausman test. These tests are crucial in assessing the validity and reliability of the chosen model for analyzing panel data. Subsequently, the classical assumption test is performed to check for specific assumptions, such as the absence of multicollinearity and heteroscedasticity. The final step is the hypotheses test, which comprises the F test, coefficient test, and partial significance test. These tests play a significant role in determining the statistical significance of the hypotheses and evaluating the relationships between variables in the data.

RESULTS AND DISCUSSION

Table 3. Descriptive Statistics

Variable	N	Min	Max	Mean	Median	Std Dev
BTD	671	-0,576325	0,408493	-0,005224	-0,003413	0,054948
ABTD	671	-0,453801	0,347771	-0,000755	-0,00000694	0,047616
AEM	671	-0,923861	0,277964	-0,016882	-0,010175	-0,01018
REM_CFO	671	-0,388141	0,543321	-0,023995	-0,022882	0,082881
REM_PROD	671	-1,8589970	0,887815	-0,017465	0,013125	0,013125
REM_EXP	671	-0,052971	0,229185	0,021987	0,018449	0,023444
LEV	671	-0,397695	2,527162	0,115862	0,090516	0,198047
GROWTH	671	0,057869	1,92534	0,447165	0,428740	0,220779
SIZE	671	11,67872	19,00488	15,21782	14,99011	1,54622
PTROA	671	-0,572786	0,884856	0,116492	0,092293	0,126386
FOR D	671	-	1,00000	0,342772	-	0,47499

Source: Processed data eviws 12.

Descriptive statistics reveal that both BTD and ABTD have a negative mean, which indicates that the company's operating profit is higher than its accounting profit. This conclusion may be drawn from the fact that the company's fiscal profit is bigger than its accounting profit. Businesses can get without paying taxes by cutting their earnings, as long as they do so within acceptable bounds and not by an unreasonable amount. In addition, the fact that the mean values for the variables AEM, REM_CFO, REM_PROD, and REM_EXP are all negative indicates that, in general, businesses utilize accrual and real earnings management in order to manage rises and declines in profit in a manner that is essentially inconsequential. The conclusion that corporations often manage their accruals and actual earnings simultaneously may be drawn from the fact that the mean value for the variable is higher than its median value.

Panel Model Test and Classical Assumptions Results

The results of the panel model test were analyzed to understand how well different equation models fit the data. The test showed that models 1, 2a, 2b, 2c, 4b, and 4c used a common effects regression model. These models had cross-section F probability values that were higher than a certain threshold. The specific probability values were 0.2141, 0.9430, 0.8936, and 0.9512. On the other hand, models 3 and 4a used a fixed effects regression model. To check if the assumptions for the analysis were met, two tests were conducted. The normality test combined with the Kolmogorov-Smirnov test indicated that the first assumption, which is about normality, was not met. Another test was performed to assess multicollinearity, which examines if there are associations among certain variables. This test revealed that there were no associations between the variables ABTD, AEM, REM_CFO, REM_PROD, REM_EXP, LEV, GROWTH, SIZE, PTROA,

and FOR_D. This analysis was based on a specific model that considers multicollinearity. Finally, two additional tests were performed to examine classical assumptions and heteroscedasticity. The outcomes revealed that, except for the leverage variable, all the other variables had probability values that were above 5% significance level. This indicates that the research model being analyzed does not exhibit any problems with heteroscedasticity.

Hypothesis Testing Results

As presented in Table 1, our hypothesis testing results showed a statistically significant positive correlation between Accrual Earnings Management (AEM) and Accounting Book to Tax Differences (ABTD), with a p-value of 0.000 (<0.05). The regression analysis indicated an increase of 0.115113 units in ABTD for each unit increase in AEM. Similarly, the reverse relationship from ABTD to AEM in Table 3 also demonstrated a significant positive correlation (p-value $0.000 < 0.05$). For each unit increase in ABTD, AEM increased by 0.662291 units. Table 2 revealed a significant positive correlation between Real Earnings Management Production (REM_PROD) and ABTD (p-value $0.000 < 0.05$). Each unit increase in REM_PROD correlated with a 0.035457 unit increase in ABTD. The reverse relationship from ABTD to REM_PROD in Table 4 was consistent with this, showing a significant positive correlation (p-value $0.000 < 0.05$). For each unit increase in ABTD, REM_PROD increased by 1.092824 units. Conversely, Table 2 demonstrated a significant negative correlation between Real Earnings Management Expense (REM_EXP) and ABTD (p-value $0.000 < 0.05$). Each unit increase in REM_EXP correlated with a 0.345520 unit decrease in ABTD. The reverse relationship from ABTD to REM_EXP in Table 4 confirmed this, showing a significant negative correlation (p-value $0.000 < 0.05$). An increase of 0.081671 units in ABTD correlated with a decrease of 0.081671 units in REM_EXP. However, the relationship between Real Earnings Management Cash Flow from Operations (REM_CFO) and ABTD was not statistically significant, with a p-value of 0.9539 (>0.05). This non-significant relationship was consistent when reversed from ABTD to REM_CFO (p-value $0.2913 > 0.05$).

Discussion

Tables 4 and 6 present the findings that AEM has a significant positive relationship with ABTD. This implies that companies implementing AEM practices tend to engage in higher levels of tax avoidance. These results are consistent with previous studies conducted by Frank et al. (2009), Ginting & Martani (2017), Surahman & Firmansyah (2017), Morais & Macedo (2021), and Masri (2022). Moving on to REM, as shown in Tables 5 and 7, different REM methods shows varying results. Companies using the REM_CFO (Real Earnings Management through Abnormal Cash Flow from Operations) method do not exhibit a significant relationship with ABTD. However, REM_PROD (Real Earnings Management through Overproduction) shows a positive association with ABTD, indicating that companies using REM through overproduction methods tend to be more involved in tax avoidance. These findings support previous studies by Geraldina (2013), Surahman and Firmansyah (2017), and Masri (2022). On the other hand, REM_EXP (Real Earnings Management through Discretionary Expenses) is negatively related to ABTD, suggesting that companies employing discretionary expenses for earnings management tend to have lower levels of tax avoidance. The negative

relationship between REM_EXP and ABTD findings align with previous studies by Geraldina (2013), Morais & Macedo (2021), and Masri (2022).

Based on the significant positive relationship found between accrual earnings management and real earnings management through overproduction, it suggests that businesses have the potential to increase their earnings and effectively manage their tax expenses by utilizing methods that involve accrual earnings management and real earnings management through overproduction. However, companies face a difficult decision between maximizing earnings and reducing their tax burdens when using real earnings management through abnormal cash flow from operations and discretionary expenses. This indicates that companies must carefully consider the trade-off between maximizing profits and managing their tax expenses while considering the potential implications of their choices in real earnings management through abnormal cash flow from operations and discretionary expenses.

Table 4. Results of Hypothesis Testing Model Equation 1

Variable	Hypothesis	Coefficient	Prob
AEM	+	0,115113	0,0000
GROWTH	+	0,003966	0,6399
LEV	+	-0,019603	0,0141
SIZE	+	-0,0000921	0,9332
PTROA	+	0,103692	0,0000
FOR_D	-	0,006250	0,0881
N		671	
R-squared		0,200228	
F-statistic		27,66436	
Prob (F-statistic)		0,000000	

ABTD is corporate tax avoidance i with a cumulative calculation of 11 years; AEM is a discretionary accrual value based on accrual earnings management proxies; GROWTH is a growth rate term calculated from the ratio between the growth of total assets and total assets in year t; LEV, namely leverage, is measured by the ratio of total debt divided by total assets. SIZE is a variable of the size of the company; PTROA is explained as a measure of profitability taken from the value of the pretax return to assets; FOR_D is narrated as a dummy foreign operation variable.

Source: Processed data eviews 12.

Table 5. Results of Hypothesis Testing Model Equations 2a, 2b, and 2c

Variable	Hypothesis	Coefficient	Prob	Coefficient	Prob	Coefficient	Prob
		ABTD (2a)		ABTD (2b)		ABTD (2c)	
REM_CFO	+	-0,001231	0,9539				
REM_PROD	+			0,035457	0,0000		
REM_EXP	+					-0,345520	0,0000
GROWTH	+	0,007934	0,3715	0,008265	0,3380	0,011463	0,1883
LEV	+	-0,022246	0,0074	-0,020725	0,0109	-0,013092	0,1205
SIZE	+	-0,000430	0,7082	-0,000328	0,7696	0,000131	0,9079
PTROA	+	0,112300	0,0000	0,156027	0,0000	0,123344	0,0000
FOR_D	-	0,007515	0,0485	0,008118	0,0298	0,011704	0,0026
N		671		671		671	
R-squared		0,134998		0,168511		0,159404	
F-statistic		17,24542		22,39418		20,95429	
Prob (F-statistic)		0,000000		0,000000		0,000000	

ABTD is corporate tax avoidance i with a cumulative calculation of 11 years; REM_CFO is the term for the real discretionary value through abnormal cash flow from operations; REM_PROD is a term of real discretionary value through overproduction activity; REM_EXP is the term for real discretionary value through discretionary expense activities; GROWTH is a growth rate term calculated from the ratio between the growth of total assets and total assets in year t; LEV, namely leverage, is measured by the ratio of total debt divided by total assets; SIZE is a variable of the size of the company; PTROA is explained as a measure of profitability taken from the value of the pretax return to assets; FOR_D is narrated as a dummy foreign operation variable.

Source: Processed data views 12.

Table 6. Results of Hypothesis Testing Model Equation 3

Variable	Hypothesis	Coefficient	Prob
ABTD	+	0,662291	0,0000
GROWTH	+	0,024041	0,2298
LEV	+	-0,012785	0,4886
SIZE	-	-0,001046	0,6841
PTROA	+	-0,024273	0,4751
FOR_D	-	0,005719	0,4978
N		671	
R-squared		0,173641	
F-statistic		8,575849	
Prob (F-statistic)		0,000000	

AEM is a discretionary accrual value based on accrual earnings management proxies; ABTD is corporate tax avoidance i with a cumulative calculation of 11 years; GROWTH is a growth rate term calculated from the ratio between the growth of total assets and total assets in year t; LEV, namely leverage, is measured by the ratio of total debt divided by total assets; SIZE is a variable of the size of the company; PTROA is explained as a measure of profitability taken from the value of the pretax return on assets; FOR_D is narrated as a dummy foreign operation variable.

Source: Processed data views 12.

Table 7. Results of Hypothesis Testing Model Equations 4a, 4b, and 4c

Variable	Hypothesis	Coefficient REM_CFO (4a)	Prob REM_CFO (4a)	Coefficient REM_PROD (4b)	Prob REM_PROD (4b)	Coefficient REM_EXP(4c)	Prob REM_EXP(4c)
ABTD	+	-0,052077	0,2913	1,092824	0,0000	-0,081671	0,0000
GROWTH	+	-0,009065	0,4289	-0,016183	0,7355	0,010672	0,0116
LEV	+	0,011182	0,2902	-0,018376	0,6851	0,024653	0,0000
SIZE	+	-0,000834	0,5711	-0,002620	0,6734	0,001610	0,0034
PTROA	+	0,126947	0,0000	-1,357641	0,0000	0,041308	0,0000
FOR_D	-	0,003731	0,4398	-0,025253	0,2241	0,012739	0,0000
N			671		671		671
R-squared			0,544392		0,314324		0,180118
F-statistic			48,76556		50,65481		24,27543
Prob (F-statistic)			0,000000		0,000000		0,000000

ABTD is corporate tax avoidance i with a cumulative calculation of 11 years; REM_CFO is the term for the real discretionary value through abnormal cash flow from operations; REM_PROD is a term of real discretionary value through overproduction activity; REM_EXP is the term for real discretionary value through discretionary expense activities; GROWTH is a growth rate term calculated from the ratio between the growth of total assets and total assets in year t; LEV, namely leverage, is measured by the ratio of total debt divided by total assets; SIZE is a variable of the size of the company; PTROA is explained as a measure of profitability taken from the value of the pretax return on assets; FOR_D is narrated as a dummy foreign operation variable.

Source: Processed data views 12.

Additional Testing

Additional testing have shown that accrual earnings management methods might provide a better explanation for BTD than ABTD. In addition, when the ABTD measure was applied to the outcomes of the tests, it was found that the findings were consistent. When it comes to actions related to the management of actual earnings, BTD is more explainable than ABTD. In addition, the findings are in line with the measuring of tax avoidance by ABTD. Both BTD and ABTD exhibit comparable results when examining the link between the avoidance of taxes and the management of accrued earnings. In addition, in comparison to BTD, ABTD is better able to describe actions related to real earnings management, and the findings about the link between BTD and real earnings management are compatible with the findings regarding the testing of the hypothesis model equation 4 utilizing ABTD.

CONCLUSION

This study aimed to explore the relationship between accruals, real earnings management, and abnormal book-tax difference (ABTD) to gain insights into their relationship. Data was collected from the annual financial reports of manufacturing companies listed on the Indonesia Stock Exchange from 2011 to 2021, with a sample size of 671. Through the process of conducting descriptive analysis, classical assumption and panel model tests, hypothesis testing, and additional testing, the study has obtained the following conclusions. There is a significant positive relationship between ABTD and both accrual earnings management and real earnings management through overproduction. This means that companies engaging in these management practices tend to have higher levels of tax avoidance. No significant relationship was found between ABTD and the management of real earnings through abnormal cash flow from operations. This suggests that these activities may not directly impact tax avoidance. There is a strong negative relationship between tax avoidance and managing earnings through discretionary spending. Companies practicing discretionary expenses for earnings management tend to have lower levels of tax avoidance. Further analysis with BTD revealed that accrual earnings management provides a better explanation for ABTD than real earnings management. Additionally, ABTD is more effective in explaining real earnings management compared to BTD. Based on these findings, it can be concluded that accrual and actual earnings management techniques, particularly through overproduction, play a significant role in tax avoidance. However, it is not clear how managing real earnings through abnormal cash flow from operations and managing real earnings through discretionary expenses affect tax avoidance.

The academic community, financial investors, and government regulators are the target audiences for this study. To begin, this study contributes new information to the body of scholarly literature on the topics of wages management and tax avoidance. Second, this research is a consideration for investors to contribute information linked to the potential of earnings management techniques, both accruals and real, that may add to or enhance the company's efforts to reduce tax payments and maximize earnings. This information can be connected to the possibility of earnings management practices, both accruals and real. Thirdly, the findings of this research are anticipated to constitute input for regulators as well as a "red flag" about the potential existence of tax avoidance connected to the actions of companies in order to control earnings. It is possible to adopt or use anti-tax

avoidance regulations such as GAAR (General Anti-Avoidance Regulations) and SAAR (Specific Anti-avoidance Rules) in order to prevent tax avoidance through profit-generating activities.

This research has certain drawbacks, the most significant of which is that it is restricted to empirical studies that rely solely on data taken from financial reports rather than investigating the manner in which the real practice is carried out within businesses. Second, the focus of our investigation is a manufacturing business that is found solely on the IDX stock exchange. Last but not least, there is a time constraint placed on the study, with studies only being conducted between 2011 and 2021.

It is anticipated that future study will carry out qualitative research using case studies to investigate how the practice of profit management and tax avoidance by firms broadens the range of objects that may be researched, such as focusing on property, logistics, infrastructure, and agricultural businesses. This is a recommendation for how future research should be conducted. In conclusion, broadening the scope of study periods to include not only those years between 2011 and 2021 but also those years afterwards, such as those years between 2000 and 2021.

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