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Book-Tax Gap: Evidence From Indonesia

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This research investigates factors affecting the book tax gap in Indonesia. Indonesian tax law limit the discretion used by management in calculating the income, therefore, the difference between accounting income and taxable income is considered to be a potential sign of earnings management. We analyze several factors that—based on previous research—affect earnings management practice, such as company's size, level of leverage, level of capital intensity, level of inventory intensity, number of affiliation, and profitability. We also use other proxy of earnings management, such as Total Accruals and the existence of Tax Assessment Letter from Tax Officials. Using the 10 years' data from 1999-2008, we find that factors affecting book tax gap in Indonesia is total accrual and size. This shows that management discretion that reflected in total accruals will affect the level of company's book tax gap, along with the size of the company. This means the bigger the size of a company in Indonesia, the better the monitoring conducted that lead to lower book tax gap. This finding will give insight to accounting researchers towards the earnings management practice and the use of book tax gap in developing country.

Keywords: tax, book tax gap, earnings management, accrual, Indonesia

Introduction

Researchers around the world have long conducted research on earnings management and the factors that influence such practice. The reason is the existence of potential dangers posed by the practice of earnings management—a practice that misleads financial statement's users. The differences between accounting income and taxable income have been considered as one of the proxy of earnings management in accounting research. Palepu, Healy and Bernard (2000) stated that the greater the differences between accounting and taxable income, the more investor must be careful in analyzing corporate financial statements.

Previous studies about the book tax gap showed that differences between accounting income and taxable income can be used to identify the existence of earning management practice in a company. However, in Indonesia, research about book-tax difference focused mostly on the effective tax rate and the use of deferred tax. Comprehensive studies on the differences between accounting income and taxable income have never been done. Therefore, this study attempted to see whether the factors that have been considered to trigger earning management practice will affect the amount of book tax gap in Indonesian companies. This research will also use a longer time period, which is from 1999 to 2008. We use the year 1999 as the accounting standard on deferred tax was issued and implemented in 1999 (although it was compulsory in 2001). This longer time period is

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expected to capture the book tax gap phenomenon in relation to earning management in Indonesian companies.

Prior Research

Book tax gap is the difference between accounting income and taxable income. The difference arises as the result of different purposes between accounting and taxation rules on earnings measurement. In Figure 1, the differences between accounting and tax can be divided into permanent (substantial) and temporary (time of recognition).

Study in the US conducted by Palepu, Healy and Bernard (2000) stated that the greater differences between accounting and taxable income, the more aware financial statement users should be. The same is expressed by Mills and Newberry (2001), which states that the bigger the incentive for management to conduct earning management will result in higher differences between accounting and fiscal profit. These earlier studies showed the relation between corporate earnings quality and the book tax gap.

The use of book-tax gap as an earning management proxy has been tested by Phillips, Pincus and Rego (2003). They conducted a study using an alternative model which use deferred tax expenses to detect earning management, compared with the accrual models. The reason of using deferred tax expenses is because tax rules generally only give a little leniency for discretion in accounting choice relative to the generally accepted accounting principles (GAAP). The hypothesis developed is deferred tax expense (DTE) which will increase the use of accrual measurement in detecting earning management in order to avoid decline in profits, avoid losses, and manage earning estimation by the analysts. Result showed that DTE shown to increased the usefulness of accrual measurement in detecting earning management in order to avoid decline in profits and avoid losses, but not proven for earning management is being done to deal with earnings estimates made by analysts.

The same study has been conducted in Indonesia using deferred tax expenses variable as a tool to detect earnings management (Yulianti, 2005; Satwika & Damayanti, 2005). Yulianti (2005) tested alternative model using deferred tax expenses to detect earnings management in Indonesia compared with the use of accruals. The hypothesis developed is the bigger the deferred tax expense, the higher the probability for company to conduct earnings management. The result using 446 observations from companies listed in the Indonesian Stock Exchange for the period of 1999-2002 shows that deferred tax expense variable can explain the probability of managing earnings with high level of confidence of 95% compared to 90% of the discretionary accrual model. However, the regression result of earnings management factors to earnings management measurement indicates that these factors together have no effect on deferred tax expenses. Earnings management factors used in this study include the corporate size, CPA firm size, corporate profitability, corporate growth, and corporate liabilities. Given this and Yulianti (2005) stated that the use of deferred tax expense to measure earnings management in general is questionable.

Satwika and Damayanti (2005) using sample of non-financial companies listed on the Indonesian Stock Exchange for 2000-2002 period showed that: (1) Deferred tax expense is incrementally less or equally beneficial with accrual in detecting earnings management to avoid reporting decline in profit; and (2) Deferred tax expense incrementally is more beneficial compared to accrual in detecting earnings management to avoid reporting loss.

These two researches in Indonesia are used as guidance in this research that differences arise between accounting income and taxable income can be a potential sign of earnings management.

Hypothesis Development and Research Model

The importance of book-tax gap was mentioned by Hanlon (2005), which said that book-tax gap can be an indication of earning persistence, accrual and cash flow for subsequent period. This thought is based on the understanding that so little discretion can be used in calculating taxable income because of the tight regulations. Book-tax gap can give information on management discretion in recognition of accrual. Further Penman (2001) even stated that book-tax gap could be used as red flag to determine any cost manipulation. Higher book-tax gap is also considered as an indication of low quality financial statements.

Hawkins (1998) and Yulianti (2005) stated the higher the company deferred tax expense to total tax expense percentage indicates the use of more liberal accounting standard. While Mills and Newberry (2001) stated that the bigger management incentives to manage earnings will result in the greater differences between accounting and taxable income.

H1: Earnings management using total accrual will have positive impact on book-tax gap.

Indonesia use self assesement in tax regulation system. The company calculate, pay tax payable and fullfill the tax return by itself. Tax official audit the complience and issue the tax assessment letter. The company must pay additional tax if the tax is underpayment. So, if the company gets an underpayment tax assessment letter, the company has done in real earnings management because it reduces the amount of tax that should be paid.

H2: The company that has done underpayment tax, has greater book-tax gap.

Empirical studies showed different conclusion related to the relationship between effective tax rate/TPE (another form of book-tax gap measurement) and company size. Several researchers found positive relation between TPE and company size (Zimmerman, 1983; Kern & Morris, 1992). Meanwhile, several studies conclude that TPE has negative relation with company size (Derashid & Zhang, 2003).

Gupta and Newberry (1997) stated that inconsistencies between TPE and company size are sample specific (related to sample selection), and it won't happen to companies with longer histories. This means, if the sample used is companies with longer histories the result would show there are no significant relation between TPE with company size. Meanwhile, if the sample used is the companies with shorter histories the result would show there are significant relation (either negative or positive) between TPE and company size.

Research in Indonesia on the relation between TPE and company size by Soepriyanto (2008) concluded that TPE has no significant relation with company size. Moreover, Soepriyanto (2008) stated that the result could be because of survivorship bias in sample selection—where in tendency, company characteristic left in the sample will not be varied (such as: sample left only large companies).

From the above research, we suggest that company size will have positive impact on book-tax difference in Indonesia.

H3: Company size has positive impact on book-tax gap.

Corporate financing policies can affect the TPE because tax authorities have different treatments in relation to corporate capital structure (Gupta & Newberry, 1997). A company who choose to use debt financing instead of equity financing to finance its operations will have lower TPE. This is because the effects of interest payments that can be used as a tax deductible—dividend is not tax deductible—in determining corporate taxable income.

However, positive relation between TPE and debt to total asset ratio (leverage) can be occurred if company with high marginal tax rate used high debt as a source of financing (Gupta & Newberry, 1997).

Previous empirical studies proved that TPE has negative relations with debt to total asset ratio (Stickney & McGee, 1982; Gupta & Newberry, 1997; Derashid & Zhang, 2003; Richardson & Lanis, 2007). However, study by Soepriyanto (2008) stated that debt to total asset ratio has no significant relation with Indonesian companies' TPE. Moreover, Soepriyanto (2008) stated that the results are likely due to data characteristic of sample companies studied.

H3: Leverage has negative effect on book-tax gap.

Investment policies could also affect TPE. This is made possible by tax policies that allowed companies to write off expense from depreciable assets for shorter period than the economic life of the asset. Therefore companies that put more emphasis on capital intensive will have lower TPE (Stickney & McGee, 1982). Because inventory intensity is a substitute of capital intensity, vice versa, the higher inventory intensity the higher company's TPE (Zimmerman, 1983).

Gupta and Newberry (1997) proved that companies with higher fixed asset to total asset ratio will give lower TPE while companies with higher inventory to total asset ratio will also have higher TPE. This is possible because fixed asset depreciation expense can be used as tax shield in calculating corporate taxable income but not with inventory. The result was backed by studies of Derashid and Zhang (2003), Richardson and Lanis (2007) and Soepriyanto (2008) which have the same conclusion.

Based on the description above, fourth and fifth hypothesis of this study are (stated in alternative hypothesis):

H4: Net fixed asset to total asset ratio (capital intensity) has positive effect on book-tax gap.

H5: Inventory to total asset ratio (inventory intensity) has negative effect on book-tax gap.

Indonesian taxation stated that the income from subsidiaries with more than 25% ownership is not a tax object. Tax calculation is done separately and not consolidated. If the subsidiary's profit is included in the company then the tax calculation is done separately. If the affiliation is tight, it could impact the amount of tax if calculated separately or consolidated. Consolidation process requires the elimination of inter-company transaction between parents and subsidiaries. Therefore the hypothesis developed is:

H6: Affiliated companies (25%) or company with subsidiaries have an effect on book-tax gap.

We use profitability as a control variable in the model.

Regression model used in this research is:

$$BTG = \alpha + \beta_1 TACC + \beta_2 LETT + \beta_3 Size + \beta_4 LEV + \beta_6 CI + \beta_5 AF + \beta_6 InvI + \beta_7 ROE + \varepsilon$$

BTG = Book-tax gap (earnings before tax–taxable income);

$TACC$ = Earnings management with total accrual measurement;

$LETT$ = Earnings management with dummy variable official assessment letter (1 if company received SKP, tax assessment letter, and 0 if not);

$Size$ = Company size using total asset log;

LEV = Leverage measured with long term liabilities to total asset ratio;

CI = Capital intensive measured with net total assed to total asset ratio;

$InvI$ = Inventory intensive measured with total inventory to total asset ratio;

This also showed that companies have the tendency to do income decreasing earnings management that is not recognized by tax regulations.

Table 1
Result of Regression Model

Model 1	Unstandardized coefficients		Standardized coefficients		
	B	Std. error	Beta	t	Sig.
(Constant)	2.036E9	7.039E8		2.892	0.004
TACC	0.472	0.104	-0.128	-4.537	0.000
LET	-1.866E8	1.523E8	-0.034	-1.226	0.221
SIZE	-1.046E8	3.549E7	-0.085	-2.947	0.003
LEV	4.807E7	8.664E7	0.141	0.555	0.579
CI	-1.028E8	1.361E8	-0.293	-0.755	0.450
INV	2.729E8	3.492E8	0.156	0.782	0.435
AF	-1.126E7	1.718E8	-0.002	-0.066	0.948
ROE	-2,493.687	47,698.867	-0.001	-0.052	0.958

Notes. Dependent variable: BTGAP.

Company size also has an effect on the amount of book-tax gap, where large corporations has lower book-tax gap. This is in accordance with Derashid and Zhang (2003), Richardson and Lanis (2007) that concluded on negative relation between effective tax rate and company sizes. This could be the result of tight supervision by tax authorities in large companies in Indonesia, so earnings management practice to lower income can be minimized.

Sensitivity Analysis

This study also tries to replace book-tax gap variable with effective tax rate variable (as used by previous studies in Indonesia). Results showed that total accrual variables, assessment letter, size, leverage, capital intensity, inventory intensity, affiliation and profitability have no effect on corporate effective tax rate level.

Furthermore, this study also tries to exclude firm-year 2008, because on that year Indonesian government revised Income Tax Act. This new law substantially changed several things, such as the decrease of tax rate used in calculating income tax. We assume that these changes can affect management behavior in managing company's earnings. However, statistical analysis showed similar result with previous studies. Thus, the enactment of new taxation law on 2008 resulted in differences in factors influencing company's book-tax gap.

Conclusions

This research renews the book-tax research in Indonesia by using a longer time period (1999-2008) and analyzes the gap thoroughly, without restriction on the type of differences. Using the Indonesian tax law, we conclude that earnings management activity in Indonesia can be reflected in both temporary and permanent difference, so the separation of the two differences can lead to error in measurement of earnings management activity.

The descriptive analysis conducted earlier in this research shows that the amount of temporary and permanent differences is not significantly different. Therefore, the value of book-tax gap is highly related with these two differences.

The regression analysis shows that factors affecting book-tax gap in Indonesia are the total accrual and size of the firm. Total accruals have been tested in previous studies in Indonesia as a better proxy of earnings management than other models of accrual. Therefore, we conclude that the level of earnings management that is done through management discretion (therefore reflected in total accrual) will impact the level of book-tax gap. As the value of average taxable income is higher than accounting income, we conclude that Indonesian companies tend to do the income decreasing earnings management that does not suit taxation law. We also find that the size of the firm is negatively related with the book-tax gap. We believe that this result is influenced by the tight supervision of the Indonesian tax authorities.

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