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The impact of privatization on earnings management in a developing country like Iran

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One of the important reasons for privatization is increasing management performance because privatization is often associated with a change in the management of the company, on the other hand, managers in the private companies have more freedom than public companies, also in the private companies giving reward is based on performance, and then managers have enough incentive to manipulate earnings. The main purpose of this study is to investigate if this theoretical literature is true in practice especially in developing country like Iran. For this purpose this paper investigates the effect of privatization on earnings management to see if EM changes after privatization toward before it. In fact, it tests earnings management behavior in the period surrounding the privatization. The results show that firms with low earnings before accruals have relatively high earnings management than firms with high earnings before accruals, and the private companies involved in more aggressive earnings management practices or in detail, private companies tend to manipulate earnings upward more aggressively when their earnings before discretionary accruals are poor, and they downplay their earnings more than public companies when their earnings before discretionary accruals are exceptionally high. Also, the government action to restructure the company before inviting prospective investors is considered consistent with earnings management. It is opined that the findings of this study are indicative of what could be the situation surrounding privatization in developing country like Iran. Also, these results show earnings management after privatization removes quickly upward than the period before privatization.

Key words: earnings management, privatization, private company, public company, earnings before accruals, discretionary accruals, total accruals.

INTRODUCTION

Privatization has evolved governmental economics in the last fifty years. Some countries have been beneficiary and some experienced most losses. These countries did not follow the main purposes of the privatization correctly. Because of Iranian constitution, No.144, public companies must change to the private companies. This changing had a slow speed in the past. But in the last decade the companies number increase quickly. Also, the government of Iran urgently needs expanded and more dynamic private sectors, more efficient and effective infrastructure/utility provision, and increased investment from both domestic and foreign sources. Privatization is one way to address these problems. But, Does the privatization leads to proficiency of the Iranian companies? If so, what affect it has on Earnings Management?

Passing the possession could not improve economic condition lonely, unless with achieving the determined purposes. The most important purpose of privatization in Iran is increasing the proficiency. On the other hand, we can say private section increase proficiency, when managers to be consisted high interest for conducting the company. Only thing that increase the motivations of managers are their benefits and revenues. Then, they try to show the best performance have enough incentive to manipulate earnings. This research shows if with privatizing this incentive change or not.

Empirical evidence on the effect of privatization of enterprises in both developed and developing countries suggests that this is often likely to lead to major improvement in economic performance. However, where privatization is not politically feasible, also reform alternatives
alternatives such as management contracts, performance contracts, and greater exposure to competition may, in some contexts, enhance company’s performance, although typically they are second-best policy options to privatization. In spite of some well-documented market failures, it is generally believed that a system based on private ownership and clearly defined property rights provide better incentives for efficient decision-making than one based on central planning (Alchian and Demsetz, 1972; Grossman and Hart, 1986; Boycko et al., 1994). The ideal ownership structure in terms of management performance is the owner/operator. Where there is no separation between management and control of a firm, all efficiency gains of the enterprise accrue to the owner/operator who then has every incentive to operate the firm efficiently. However, this type of ownership structure places grave limits on the availability of capital to the firm, and so increasingly the ranks of shareholders have expanded and the professional manager has replaced the owner/operator. Unfortunately, the professional manager has fewer incentives than the traditional owner/operator to manage the corporation effectively since far fewer efficiency gains flow directly to the professional manager than to the owner/operator. In the modern firm, shareholders must monitor managerial performance to ensure effective management. The efficacy of this type of ownership structure can thus be analyzed in terms of management incentives, monitoring incentives and monitoring ability.

The development of stock market in Iran has paralleled the transition of Iranian economy from a planned economy to a market economy. To achieve the objective of establishing a “socialist market economy”, the Iranian government announced its plan to transform the old state-owned enterprises (SOEs) into modern listed corporations in the early 1990s. Since then, many Iranian SOEs have been undergoing partial privatization through initial public offerings with the government retaining a substantial portion of ownership in the newly listed firms.

This paper examines earnings management behavior on the verge of privatization in Iranian companies to test if privatization has direct effects on earnings management. Also, with comparing earnings management in the private companies and public companies it investigates which kind of companies increase management incentive to manipulate earnings management.

This study extends the previous empirical literature in various directions: First, Some investigations have dealt with observed cases of fraud, litigation, SEC enforcement actions or earnings restatements (DeFond and Jiambalvo, 1991; Beasley, 1996; McMullen, 1996; Dechow et al., 1996; Abbott et al., 2000; Abbott et al., 2004). Other works go beyond the scope of these extreme situations to address earnings management, commonly estimated by abnormal accruals (DeFond and Jiambalvo, 1993; Becker et al., 1998; Francis et al., 1999; Peasnell et al., 2000a; Frankel et al., 2002; Klein, 2002b; Kim et al., 2003; Xie et al., 2003; Bédard et al., 2004). Earnings management does not necessarily result in the litigious context of fraudulent financial reporting; it can be defined as the use of managerial discretion to influence the results published to the company’s stakeholders (DeGeorge et al., 1999). Also, some studies investigated the relation between accounting system (accrual and cash) and shareholder protection. Hung (2001) studied the relation between accrual accounting and the value relevance of accounting measures in countries with different levels of shareholder protection. She finds that stronger shareholder protection improves the effectiveness of the accrual system. She argues that accrual accounting provides better matching of revenues and expenses than cash accounting and therefore makes accounting information more value relevant. However, accrual accounting also presents more opportunities for managers to manage earnings and hence may cause accounting information to be less value relevant. She predicts that strong shareholder protection will attenuate this negative impact.

Ownership structure influences the monitoring mechanism a company uses, including the monitoring of earnings-management activity. Balsam et al. (2002) state that institutional investors, who are sophisticated investors, are more capable of detecting earnings management than non-institutional investors because they have more access to timely and relevant information. Existing literature only examines the effect of institutional investors on earnings-management magnitude, while this study will examine the effect of company’s type (private or public) on the earnings management before accruals.

Second, the most previous studies were done on privatization mechanism throughout political and economical aspects or be done in developed countries. (Dornbusch and DePablo, 1989; Roubini and Sachs, 1989; Knack and Keefer, 1995; Cuveirman, Edwards and Tebellini, 1992; Edwards and Tebellini, 1991: Shahira F. Abdel Shahid, 2002; Onur Ozsoy and Cengiz Yavilioğlu, 2008; Tecles, 2010). This paper is the first paper that provides evidence on earnings management around privatization from a non-developed country or non-US market.

Private companies have a greater monitoring role if the company’s ownership structure is widely dispersed. Widespread ownership structure only takes place in Anglo-Saxon countries, such as the United States and the United Kingdom. In other developed and developing countries, firms usually are controlled by founding families. La Porta, Lopez-De-Silanes and Shleifer (1999), report that 85% of Spanish firms have controlling shareholders, compared to the United States and the United Kingdom, which have only 10 and 20%, respectively. However, the majority of public firms in developing countries are controlled by families. Arifin (2003) suggests that agency problems in family controlled firms are not as serious as that in publicy-controlled firms or firms without
controlling shareholders. In the former, there are fewer agency problems because the conflict between principal and agent is less than that in the latter. However, as Claessens, Djankov, Fan and Lang (1999) find, family-controlled firms, through pyramid ownership structure and their business group, expropriate minority shareholders (the public).

This study examines whether ownership structure (before and after privatization) influence the type of earnings management selected in public firms in Iran, when they have low earnings before accruals. Prior research provides evidence that firms manage earnings for a variety of reasons. But, none of the prior studies have investigated the differences in the levels of earnings management surrounding privatization.

The purpose of this paper is to examine differences in earnings management behavior on the verge of privatization, and to examine the motivation behind earnings management before and after privatization, there are many reasons to expect the existence of differences between the motivations before and after privatization. For example, one of the important reasons for privatization is increasing management performance because privatization is often associated with a change in the management of the company, in the other side managers in the private companies have more freedom than public companies, also in the private companies giving reward is based on performance, then managers have enough incentive to manipulate earnings. In the other hand, it seems private companies (companies after privatization) have more control to management performance in Iran.

Usually the managers of the public companies are unfavorable with privatization because the control in the public companies is lower than private companies, although they would be change because of their performance. Thus, the role of institutional investors and the formation of the controlling coalition within family firms are vital and can have a significant impact on the performance of the firm (Bennedsen and Wolfenzon, 2000; Bloch and Hege, 2001; Claessens et al., 2002; Gomes and Novaes, 2001). This study examines if private companies have more tend to manage earnings when their earnings before accruals are low than public companies.

In different seminal papers, Hayn (1995), Burgstahler and Dichev (1997) document the existence and prevalence of discontinuities around thresholds in earnings distributions. Burgstahler and Dichev (1997) shows that the histograms of scaled net income and changes in net income exhibit discontinuities around zero with a disproportionately low frequency in the partition immediately to the left of zero and a disproportionately high frequency in the partition which includes zero. They attribute these findings to earnings management by firms to meet earnings thresholds of zero earnings and the previous period’s earnings. The Burgstahler and Dichev (1997) paper has had a major impact on accounting research and their methodology is used in many subsequent papers.

There are some researches that focus on privatization with accounting view in developing country and other countries. Tecles (2010) analyzes the efficiency of the Brazilian banking sector over the post-privatization period of 2000 to 2007. He employs a Bayesian stochastic frontier approach, which provides exact efficiency estimates and confidence intervals and thus, allows an accurate comparison across institutions and bank groups. The results suggest that large bank; are the most cost and profit efficient, supporting the concentration process observed in recent years. The remaining public banks have had improvements in cost efficiency, but are relatively profit inefficient. Finally, the research shows a positive impact of capitalization on efficiency. Some examples of privatization deals conducted via the stock market in several developing countries like Egypt that majority of companies had a reduction in their valuations, mainly due to the overall negative macroeconomic circumstances that Egypt has suffered from since 1997, which were later intensified due to the 11th September 2001 events (Shahira Abdel Shahid, 2002). The privatization process in Turkey has been successful during the recent years due to adequate legislative regulations,

LITERATURE REVIEW

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regulations, macroeconomic stability, and political stability (Onur Ozsoy and Cengiz Yavilioğlu, 2008).

Craig and Amernic (2008), explore the importance of senior management discourse in the aftermath of a privatization. A narrative perspective is adopted, in which an imagined future post-privatization era initially articulated in accounting language is then told and retold as the post-privatization years unfold. The results of their paper emphasize the important features and role of accounting language and accounting-based performance benchmark measures in the narrative construction of the success of a privatization by corporate leaders. Craig and Amernic (2004), investigate that the potential for accounting to be implicated in constructing a “privatization mentality” and in persuading employees to accept a change in organizational orientation and culture. Their study finds that the language and technical features of accounting were exploited in the prelude to privatization to help sustain the economic wisdom of a privatization decision. The proponents of the privatization used accounting strategically to justify and sustain the privatization. Major societal events, such as the privatization of national assets, merit close scrutiny so that an accounting world thus constructed should not be permitted to pass unchallenged (Craig and Amernic, 2006).

The performance improvement of privatized firms cannot be taken for granted merely by ownership change; instead, the performance gains of privatization could be realized only in concert with other institutional arrangements, including market openness, the modest and short-term bureaucratic control after privatization, and corporate health prior to privatization. Wu (2007), examines the variance of post-privatization performance outcomes by three institutional arrangements taken place in the process of ownership transfer in Taiwan. His research suggests an indispensable role of supportive policy measures, including market openness, post-privatization involvement of government and corporate reforms prior to privatization, in the performance effects of privatization.

Consistent with the idea that managers are particularly concerned about fiscal year earnings, Collins et al. (1984), Das and Shroff (2002) and Hayn et al. (2001) provide evidence that the characteristics of fourth quarter earnings differ from earnings for the other three quarters. These studies generally find that fourth quarter earnings exhibit higher volatility. Capital markets seem to recognize this—the preponderance of research has found lower earnings response coefficients for fourth quarter earnings relative to other quarters (Salamon and Stober, 1994).

While property rights theory clearly demonstrates that private enterprises should perform better than either enterprises in the state sector or enterprises with a mixed ownership, empirical evidence on the performance of enterprises with a mixed ownership is scarce and tends to concentrate on companies from regulated industries. In one of the rare studies, Boardman and Vinning (1989) analyze a sample of the 500 largest non-US industrial firms and demonstrate that private enterprises outperform both state-owned enterprises and enterprises with a mixed ownership. They explain this result by the conflict between private and public shareholders in mixed enterprises, which inhibits the monitoring of management. Consequently, partial privatizations may be worse than complete privatization or continued state ownership.

Achieving earnings targets, such as avoiding losses, avoiding earnings decreases and meeting or beating analysts’ forecasts has been extensively studied in the accounting literature (Burgstahler and Dichev, 1997; DeGeorge et al., 1999). In general, the consensus in prior research is that managers care greatly about these earnings benchmarks and are willing to engage in costly earnings management strategies to achieve them (Brown and Caylor, 2005; Graham et al., 2005).

Specifically, the survey results provided by Graham et al. (2005) report that top executives admitted to such behavior. About 75% of respondents agreed that beating earnings benchmarks is important to them. Leuz, Nanda and Wysocki (2003) investigate how investor protection affects firm earnings management practices across countries. They find that earnings management is negatively associated with investor protection and legal enforcement. They conclude that investor protection is a fundamental determinant of the quality of reported accounting earnings across countries. This study extends their study, and systematically investigates how accounting standards affect earnings management and the quality of reported financial information. Note they investigate how investor protection affects firm earnings management practices across countries, and not to investigate the effect of earnings before accrual to earnings management manners in different levels of investor protection.

In contrast to prior literature, this study investigates the effect of privatization on earnings management procedure to see if EM changes after privatization toward before it. In fact, it tests the incentives of managers to manipulate earning in the period surrounding the privatization to show if privatization give enough motivation to them to involve in more aggressive earnings management toward before privatization.

**PRIVATIZATION PROCEDURES IN DETAILS IN IRAN**

**Stage 1: Before divestiture**

1. The public entities are organized in context of specialized holding companies. The specialized holding companies, if requires, restructure the public entities and render the proposal to the secretariat of High Commission of Divestiture for determining the status.

2. The High Commission of Divestiture will consider, confirm and recommend the list of companies which could be sold, dissolution, integration and their time
scheduled plan and sales method and will offer the same to the Council of Ministers of Ministers.

3. The Council of Ministers will study and approve the list including amount of divestiture, sales method and time scheduled plan.

4. The Specialized Holding Company will submit the power of attorney to Privatization Organization for meeting the divestiture stages and will hand over the financial papers and documentation accompanying the required information, accordingly.

5. The Privatization Organization upon obtaining the required documentation, will study and consider the ways and means for shares classification, shares basic price, the ways and means for obtaining the transaction price and also the amount of preferred shares which could be divested to the employees of that company, in accordance with the governing rules and regulations and will take action for obtaining the required permission including the shares base price from High Commission of Divestiture.

Stage 2: Within divestiture

1. The approved companies for divestiture are divided into two types in viewpoint of admission or non admission to Exchange Market, may concern. Divestiture of the companies admitted in Exchange Market is fulfilled necessarily by exchange method and divestiture of the other companies is performed through tender bid. Therefore, selection of exchange method or tender bid is subject to proportionate of company status in viewpoint of its admission or non-admission in exchange. The Privatization Organization does not absolutely use the negotiation in divestiture.

2. Gradual sales of shares to the public in exchange method are performed at the same price as stipulated on the board. In other word Privatization Organization observes the rules and regulations of Exchange Market and the shares do not need the separate pricing. Sales of classified (block) shares of the Exchange Companies are performed in accordance with the By-Law approved by the Council of Ministers by taking advantage of the company shares transaction average price at proposal of Privatization Organization and approval by High Commission of Divestiture.

3. Sales of the non-exchange companies shares are done by publishing the notice in widely circulated dailies and through tender bid and by fixing the base price, in accordance with the by-law approved by the Council of Ministers. The official experts to Justice Administration assess the base price of the shares by taking advantage of the standard and professional method mentioned in the by-law approved by the Council of Ministers and based on the same the base price is offered and approved by the High Commission of Divestiture.

4. The Privatization Organization, in any methods of exchange or tender bid, fulfills shares offering through publishing the shares sales notice in widely circulated dailies for public notice and in two instances. In the sales notice, the followings are stipulated: The base price of the shares, amount of preferred shares, terms and conditions for payment of transaction price and other cases stipulated in the Act. Therefore, offering the shares is done in a fully compatible atmosphere.

Stage 3: After divestiture

1. The Privatization Organization in major divesting, including tender bid and/or exchange, divests the shares in cash and on installments basis based on the published notice and pursuant to the application of the purchaser. In this condition while taking the required bonds will hand over the envisaged shares at bond of the Organization, so there is possibility for supervision on purchasers after divesting.

2. The Privatization Organization while concluding the divesting contract will supervise on provisions and conditions stipulated in the contract and will take action for obtaining the installments of the purchaser on due time and in case on non payment on time will make the required legal actions and measures.

3. The Privatization Organization supervises on the ways and means for convention of the company general assembly during re-payment of the installments by the purchaser according to the concluded contract and any sales of company assets and properties will be possible exclusively by written permission of the Organization.

4. The Privatization Organization will take action for rendering the facilities including discount in profit of the sales on installments basis and prolongation of the installments re-payment period for maximum two another years, in case of effective and suitable measures by the purchasers including employment increment, production increase sales and profitability and the new investments as well.

5. The Privatization Organization will render the required supervision reports to the authorities dealing with and policy makers like High Commission of Divestiture, Council of Ministers, the esteemed president and the esteemed Islamic Consultative Assembly, within the duration for transfer and assignment of shares.

METHODOLOGY

Sample

The sample consists of companies collected from Stock exchange of Iran. It covers 116 companies from the Iran. Over the period of 2005 to 2009, there were 315 firm year usable observations of which 232 observations are before privatization and 348 observations are after privatization. In fact, this research falls in economic analysis field. Therefore, the panel data is used in this research. On the other hand, in Earnings Management models there are some lag variables as $TA_{t-1}$ & $DA_{t-1}$ that cause panel...
data to be changed to dynamic panel data.

**Earnings management measures**

In order to examine the earnings management, both total accruals and discretionary accruals are used. Following Haribar and Collins (2002) total accruals are estimated as follows:

$$TA_i = \Delta CA_i - \Delta CL_i - \Delta CASH_i + \Delta STDEBT_i - DEP_i \quad (1)$$

Where $TA_i$ is the total accruals in year $t$ for firm $i$, $\Delta CA_i$ is change in current assets from year $t-1$ to year $t$ for firm $i$, $\Delta CL_i$ is the change in current liabilities from year $t-1$ to year $t$ for firm $i$, $\Delta CASH_i$ is the change in cash from year $t-1$ to year $t$ for firm $i$, $\Delta STDEBT_i$ is the change in short term debt from year $t-1$ to year $t$ for firm $i$, and $DEP_i$ is the depreciation expense in year $t$ for firm $i$.

To estimate the discretionary accruals, the modified Jones model is used (Dechow, Sloan and Sweeney 1995):

$$\frac{TA_i}{A_{i-1}} = \alpha_{1i} + \frac{\Delta REV_i}{A_{i-1}} + \frac{\Delta REC_i}{A_{i-1}} + \alpha_{3i} \frac{PPE_i}{A_{i-1}} + \epsilon_i \quad (2)$$

Where $TA_i/A_{i-1}$ is the total accruals in year $t$ for firm $i$, $A_{i-1}$ is total assets in year $t-1$ for firm $i$, $\Delta REV_i$ is revenues in year $t$ less revenues in year $t-1$ to year $t$ for firm $i$, $\Delta REC_i$ is net receivables in year $t$ less net receivable in year $t-1$ for firm $i$, $PPE_i$ is gross property, plant and equipment in year $t$ for firm $i$, and $\epsilon_i$ is error term in year $t$ for firm $i$ (unexplained component of total accruals).

To examine the difference in earnings management practices during privatization, also earnings before accruals (earnings before discretionary accruals = (operating income, / total assets, $i$) – discretionary accruals) is calculated, for each level of privatization the observations are ranked according to this measure and the mean of earnings before accruals is calculated to see the manner of earnings before, during, and after privatization. If the companies after privatization are more aggressive in managing earnings, will follow heavier income increasing strategies relative to the before privatization, so that they will have significantly more positive accruals than after privatization. On the other hand, in the before of privatization, the companies will follow more aggressive income decreasing strategies that will leave them with significantly more negative accruals than the after privatization.

Many bonus and compensation schemes are based on earnings measured over this time. These pay schemes provide incentives for managers to manipulate fiscal year income towards thresholds to maximize their compensation. Incentives to manage income are probably strongest in the fourth quarter of the fiscal year (John Jacoba and Bjorn Jorgensen, 2007). But, do these incentives change after privatization, if so, how to do those change?

For this purpose, I investigate the procedure of earnings for five years not during a fiscal year. However, earnings management incentive is higher in the year-end than other quarter of a fiscal year (Durtschi and Easton, 2005; John Jacoba and Bjorn Jorgensen, 2007), but changing in the procedure of earnings management shows how privatization has effect on earnings management or not. Also, I use the graph of TA and DA over these alternative annual periods for before, during,
Table 1. Dummy variable influence on dependent variable.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA(-1)</td>
<td>0.218848</td>
<td>0.009679</td>
<td>22.61091</td>
<td>0.0000</td>
</tr>
<tr>
<td>DUMMY</td>
<td>12282.61</td>
<td>22557.74</td>
<td>0.544496</td>
<td>0.5865</td>
</tr>
<tr>
<td>EBTA</td>
<td>-0.959113</td>
<td>0.012411</td>
<td>-77.28117</td>
<td>0.0000</td>
</tr>
<tr>
<td>OP_INC</td>
<td>0.012743</td>
<td>0.000312</td>
<td>40.87924</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Effects specification

Cross-section fixed (first differences)

<table>
<thead>
<tr>
<th>Mean dependent var</th>
<th>S.D. dependent var</th>
<th>Sum squared resid</th>
</tr>
</thead>
<tbody>
<tr>
<td>-13727.43</td>
<td>1433607.00</td>
<td>1.262114</td>
</tr>
</tbody>
</table>

Dependent Variable: TA; Method: Panel Generalized Method of Moments.

Table 2. Dummy variable influence on dependent variable.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA(-1)</td>
<td>-0.323163</td>
<td>0.000344</td>
<td>-938.1992</td>
<td>0.0000</td>
</tr>
<tr>
<td>DUMMY</td>
<td>0.202465</td>
<td>0.068271</td>
<td>2.965628</td>
<td>0.0032</td>
</tr>
<tr>
<td>EBDAs</td>
<td>-0.023009</td>
<td>0.000274</td>
<td>-83.96395</td>
<td>0.0000</td>
</tr>
<tr>
<td>OP_INC</td>
<td>-4.12E-10</td>
<td>1.24E-10</td>
<td>-3.334626</td>
<td>0.0009</td>
</tr>
</tbody>
</table>

Effects Specification

Cross-section fixed (first differences)

<table>
<thead>
<tr>
<th>Mean dependent var</th>
<th>S.D. dependent var</th>
<th>Sum squared resid</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.025117</td>
<td>4.734949</td>
<td>4943.913</td>
</tr>
</tbody>
</table>

Dependent Variable: DA; Method: Panel Generalized Method of Moments.

and after privatization to see the changing of TA and DA in the years before, during, and after privatization. If earnings management is more prevalent at the year after privatization than the year before privatization, the graph of the year after privatization shows earnings might be less smooth, i.e., have more discontinuities than the graph of earnings for the other annual periods (Figure 1).

The regression analysis using dynamic panel data is sued to validate the results of the differences test analysis. Also, a dummy variable is regressed on the accruals measure. That dummy variable equals one if privatization occurred and zero if not. Therefore, a positive and significant indicates that companies after privatization have more accruals relative to the before of privatization. In the regression model to control for earnings before the accrual measure, the operating income of the last period, and the accruals measure in the previous period. This paper runs the regression analysis twice using total accruals and discretionary accruals as measures for earnings management as shown in Equations (3) and (4):

\[ TA_{it} = \beta_0 + \beta_1 D + \beta_2 EBTA_{it} + \beta_3 OP \_ INC_{it-1} + \beta_4 TA_{it-1} + \epsilon_{it} \] (3)

\[ DA_{it} = \beta_0 + \beta_1 D + \beta_2 EBDAs_{it} + \beta_3 OP \_ INC_{it-1} + \beta_4 DA_{it-1} + \epsilon_{it} \] (4)

Where \( TA_{it} \) is total accruals calculated in Model 1, \( DA_{it} \) is discretionary accruals as calculated in (2), D is a dummy variable that equals 1 if privatization occurred and zero otherwise, \( EBDAs_{it} \) is earnings before total accruals, \( OP \_ INC_{it-1} \) is operating income in year t-1, \( TA_{it-1} \) is total accruals in t-1 and \( DA_{it-1} \) is discretionary accruals in year t-1.

RESULTS

The results in Tables 1 and 2 show that the coefficients on the dummy variable, \( \beta_1 \), for model 3 is negative and insignificant at 5% level and for model 4 is positive and significant at 5% level (coefficient 0.5865 and 0.0032; t-value 0.544496 and 2.965628). This means that privatization increase discretionary accruals on average.
more than Total accruals. These results support the results of Tables 1 and 2 that companies after privatization manage earnings more aggressively relative to before privatization. The regression results also show the significantly negative association between the earnings before accruals and the accruals measure, $\beta_2$, which indicates that companies manage earnings depending on the level of earnings in the current year. If a company has a high before accrual earnings, on average, it manages the earnings downward. On the other hand if it has low earnings before accruals, it manages earnings upward that is consistent with the earnings smoothing pattern.

According to the Table 1, dummy variable could have influence on dependent variables. Dummy variable is influenced to dependent variables to see which variable is more affected after privatization. The result presented in Table 3 shows dummy variable has more impact on op inc.companies after privatization manage earnings more aggressively downward compared to before privatization if they have exceptionally high earnings. On the other hand, after privatization, companies manage earnings more aggressively upward relative to past periods if they have low earnings. In addition, one of the privatization purposes was to increase the performance of management, and changing of EM manner could be a sign of moving to this purpose.

### Table 3. Dummy variable impact on OP_INC.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAI(-1)</td>
<td>0.209873</td>
<td>0.015648</td>
<td>13.41231</td>
<td>0.0000</td>
</tr>
<tr>
<td>EBITA</td>
<td>-0.891968</td>
<td>0.015601</td>
<td>-57.17417</td>
<td>0.0000</td>
</tr>
<tr>
<td>DUMMY*OP_INC</td>
<td>0.011714</td>
<td>0.000418</td>
<td>28.02161</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Effects Specification

Cross-section fixed (first differences)

Mean dependent var  -13727.43  S.D. dependent var  14336.07
S.E. of regression  674426.8  Sum squared resid  1.57E+14
J-statistic  11.34730  Instrument rank  10.00000

Dependent Variable: TAI; Method: Panel Generalized Method of Moments.

$TA_{it} = \beta_0 + \beta_1EBITA_{it} + \beta_2(D * OP_{INC_{it-1}}) + \beta_3TA_{it-1} + \epsilon_{it}$

### REFERENCES


