

Earnings Management and State Ownership: A Literature Review

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Abstract

Purpose: State Owned Enterprises (SOEs) have a growing importance in the economic and social life of both developed and developing countries, being present in their key sectors such as telecommunication, electricity, transportation. The purpose of this paper is to offer a comprehensive review of the up to date literature on the relation between State Ownership and Earnings management.

Design/methodology/approach: An examination of the literature was undertaken to review the quantitative studies that analyze the existence or the non-existence of a relation between State Ownership and Earnings management, comparing population and data set used, methodology applied and result achieved. To find studies relevant to the issue, we utilized Google Scholar and delimited the research to 20 top Scholarly Journals, over the interval 1996-2016.

Findings: The available literature seems to offer contrasting viewpoints regarding the relationship between public ownership and earnings management, even though studies generally show a slight prevalence towards a negative relationship. This means that the quality of the earnings published in the budgets of public owned enterprises must be slightly higher than the earnings published by private companies.

Research limitations/implications: Almost all studies reviewed present limitations that hinder the assumption of general rules regarding the obtained results. At the same time, the different studies do not always use the same system to measure earnings management activities.

Practical implications: The paper might offer interesting implications for central and local governments, in order to influence the decisions on their intervention in the market.

Originality/value: To our knowledge, this is the first study trying to attempt this emerging goal.

Keywords: state owned enterprises, SOEs, earnings management, public ownership, literature review

1. Introduction

State Owned Enterprises (SOEs) have a growing importance in the economic and social life of many countries (Christiansen, 2011; OECD, 2014; Vernon & Aharoni, 2014; Bruton et al., 2015; Subramanian, 2016; Hope & Vyas, 2017). In its last report on the size and sectoral distribution of SOEs, OECD has proved that those entities are especially present in key sectors of the national economy of the member States such as telecommunication, electricity, transportation (OECD, 2014). In a wider study, Kowalsky et al. (2013) have showed that in non-OECD countries, SOEs explain a large part of the national GDP, reaching the astonishing level of 98% in China, 81% in Russia and being anyhow largely over 50% in Brasil, India, Malesia, Indonesia and UAE.

The debate on their *performance*, and especially the comparison with the performance reached by private owned entities operating in the same industries, has become central in the *economic policy* of both developed and developing countries and has the potential to influence the decisions of central and local governments on their intervention in the market.

But while in most cases SOEs performance is still mainly measured using accounting earnings (Bortolotti et al., 2007; Megginson & Netter, 2001; Monteduro, 2014; Villalonga, 2000), the literature has *for many years* paid little attention to the impact that *State Ownership* might have on the frequency and magnitude of earnings

management (Wang & Yung, 2011; Dechow et al., 2010; Cinquini & Tenucci, 2016) and therefore on the quality of those earnings. This is especially surprising since many studies have proved that a direct relation between *ownership structure* and earnings management does exist. That was the case for studies explaining the relations between earnings management and, in turn, *ownership concentration* (Fama and Jensen 1983; Shleifer and Vishny 1989; Hart 1995), *family ownership* (Wang, 2006, Jiraporn & DaDalt, 2009), *public vs private ownership* (i.e. listed versus unlisted companies) (Burgsthaler et al., 2006; Ball & Shivakumar, 2005; Givoly et al., 2010), *institutional vs non institutional ownership* (Jambalvo et al., 2002) and *degree of managerial ownership* (Warfield et al., 1995; Lafond & Roychowdhury, 2008; Nobuyuki & Akinobu, 2008; Holderness, 2002).

Any study on the relation between earnings management and the degree of State Ownership would then perfectly fit in that stream of research with its results having the potential to shape appropriate comparisons between State Owned and Private owned entities performance. And indeed, in the last years those studies have firmly increased.

Against this background, the present research wishes to offer a comprehensive review of the up to date literature on the relation between *State Ownership* and *Earnings management*, comparing population and data set used, methodology applied and result achieved. To our knowledge, this is the first study trying to attempt this goal.

The remainder of this article is structured as follows. The methodology of the review is provided in Paragraph 2. Paragraph 3 offers a list of the reasons that might suggest the existence of a correlation between State Ownership and Earnings management. Paragraph 4 describes the studies that have supported the existence of a relation. Finally, the Paragraph 5 draws the conclusions.

2. Methodology of the Review

To find studies relevant to the issue, we utilized Google Scholar and delimited the research to the following Scholarly Journals: *Accounting, Auditing & Accountability Journal, Accounting & Business Research, Accounting Horizons, The Accounting Review, Contemporary Accounting Research, Corporate Governance: An International Review, Journal of Accounting & Economics, Journal of Accounting and Public Policy, Journal of Accounting Literature, Journal of Accounting Research, Journal of Business Finance & Accounting, The Accounting Review, The Journal of Finance, Review of Accounting Studies, Journal of Accounting, Auditing & Finance, Journal of International Accounting Research, Managerial Finance and Journal of Financial Economics*. In particular, we searched the articles having in the abstract both the following terms: “State Owned Enterprises” or “SOE” and “earnings management”, over the interval 1996-2016.

Not all the articles returned by that search have been quoted in the study that has reported just those supporting either the existence or the non-existence of a relation between State Ownership and Earnings management. At the same time, when any of those papers has made an explicit reference to other studies directly tackling the issue, also the latter have been included in the study.

3. Reasons that Might Suggest the Existence of a Relation between State Ownership and Earnings Management

There are at least six main reasons that might suggest the existence of a *positive* correlation between State Ownership and Earnings Management:

- 1) Public sector entities are flanked by a generally lower level of governance and audit quality (Alchian & Albert, 1977; Shleifer, 1998) and such a condition is typically associated with an increase in managerial autonomy that, in turn, might ease the engagement in earnings management activities (Smith, 1976);
- 2) In SOEs, the accountability chain is usually longer and wider than it is in the private owned entities and this is likely to result in an increase of the incentives to manipulate accounting data. It is *longer* because the State owning an Entity, while is a principal in respect of SOEs managers (the agents), is also an agent in respect of the community that ultimately bears the risks and accrues the benefits arising from SOEs activities. It is *wider*, because SOEs managers are directly accountable not just towards the owners but also towards a variety of stakeholders, such as citizens, public opinion, public expenditure control bodies (Sinclair, 1995), and in a wider sense, anyone in whose interest such companies should always operate (Parker & Gould, 1999).
- 3) SOEs managers may be subject to different and often contrasting interests due to the influence of different powerbases reflected in the ownership (Ghosh & Whalley, 2008, Bruton et al., 2015), so that they have to manage a range of conflicting views that potentially encourage data manipulation and lay the foundations for an increase in earnings management activities.

- 4) The breakdown of damage possibly deriving from earnings management on a larger number of people increases the likelihood that this occurs as the probability of careful control of accounts and performance is lower (Jones, 1991).
- 5) The normally lower technical level of SOEs accounting data recipients might increase the likelihood of earnings management. Previous literature has indeed proved that *earnings management* is negatively correlated with the technical knowledge of recipients (Rajgopai *et al.* 1997; Koh 2003).
- 6) As no managerial ownership can ever exist in SOE (Wang and Yung 2011), it is impossible to expect that those entities might solve the earnings management problem through the alignment of the interests of both the agent and the principal (Dempsey *et al.*, 1993; Warfield *et al.*, 1995) (Note 1).

There are also convincing *reasons* that might suggest the existence of a *negative* correlation:

- 1) As widely used in literature to explain the greater quality of financial data produced by listed companies (Ball & Shivakumar 2005), the greater attention paid to SOEs results as well as the greater number and variety of stakeholders is likely to result in an overall improvement in the quality of the financial statements (Burgstahler & Dichev, 1997). An improvement that, according to several studies (Botosan, 1997; Sengupta, 1998; Bhattacharya *et al.*, 2003), is likely to be rewarded in terms of better conditions to raise capitals on the market thus creating one more incentive to reduce earnings management.
- 2) The higher probability of public scrutiny by a large number of subjects including owner representatives, consumer associations, citizens advice bureaus, members of public spending control bodies, and non-specialist media representatives, is likely to make earnings management activities less appealing.
- 3) In many national contexts, the consequences of tampering with SOEs accounting data can be for the preparer by far more serious than those occurring in the private sector. A financial statements alteration that damages the interests of a private company can for example be resolved through a settlement between the parties, as all are interested in reaching an agreement rather than starting legal proceedings. Instead, where such alterations are discovered by a public owned company, reconciliation is much more difficult – if not statutorily impossible – to achieve (Capalbo *et al.*, 2014).
- 4) In many SOEs the appointment and eventual confirmation of managers is a predominantly political issue. In a context where relationships count more than results, the stimulus for data alteration is much lower. If the reasons for nomination, renewal or even dismissal are not linked to a company's economic results the interest in embarking upon complex and risky *earnings management* proceedings decline. Very often SOEs managers are politicians or ex-politicians who act as such rather than as *businessmen* (Cheng *et al.*, 2015), and who expect to be evaluated predominantly for political reasons than for their financial or economic results (Fan *et al.*, 2007).
- 5) Minimising taxes, that is probably one the main incentives explaining earnings management in private owned and especially in managerial owned companies, is likely to be less relevant in SOEs. In most cases, the tax outflow of the entity is, indeed, a tax inflow for its owner.

4. Studies Supporting a Relationship between Earnings Management and State Ownership

4.1 Studies Supporting a Negative Relationship between Earnings Management and State Ownership

One of the first work on earnings management in state owned enterprises is that of Aharony *et al.* (2000). The authors analysed the financial statements of 83 Chinese state-owned companies before and after Initial Public Offers (IPO) compiled between 1992 and 1995, and found evidence of an increase in ROA during the IPO year that was more pronounced when regulations were fewer – therefore indicating earnings management activities. In addition, the authors demonstrated how these activities are less prevalent in protected sectors where industries may be favoured by the State, and there are consequently fewer reasons to augment income levels for IPO purposes (Note 2). The work, in line with successive research results (Jian & Wong 2003, Chen & Yuan 2004, Chen *et al.*, 2008, Aharony *et al.*, 2010), confirms the existence of earnings management activities in Chinese state owned enterprises but does not explain if, and in what measure, this evidenced behaviour depends upon the public nature of ownership. The obtained results have not been compared with the behaviour of privately owned companies at the same time under the same circumstances. Neither would it be useful to make a comparison with the results from other international researchers conducted on earnings management during the IPO, because the authors recognised that the protectionist behaviour held by the Chinese Government and the extreme typicality of conditions characterising the IPO of companies in that country would deprive any such comparison of significance. The work of Aharony *et al.* (2010) has been completed by a more recent research made by Cheng *et al.* (2015), which again analysed earnings management around the IPO period for Chinese companies, but this

time they offer a direct comparison between the behaviour of companies in public ownership and the behaviour of privately owned companies. The analysis was carried out on data from 2003 to 2009 that involved 437 companies, comprising 177 publicly owned and 260 privately owned companies, and uses a slightly amended version of the model developed by Jones to measure earnings management. The results indicate greater evidence of discretionary accrual data for private companies, leading the authors to conclude that a negative relationship between public ownership and earnings management exists (Note 3).

Ding *et al.* (2007) and Wang and Yung (2011) also arrived at a negative relationship conclusion. Ding *et al.* (2007) compared earnings management in a group of 142 privately owned listed companies with the same number of publicly owned enterprises; the relative status of the companies was distinguished by considering the public or private nature of the major shareholder. The analysis utilises data from a single year (2002), and uses two proxies for the measurement of earnings management: a) discretionary accruals developed via the Jones model (1991), and b) non-operating income/sales used to measure the effect of non-market-based non-operating related party transactions, such as property sales. The results show privately owned firms have an increased tendency to promote budgetary policies designed to inflate final results as opposed to publicly owned companies, therefore leading to a conclusion confirming the existence of a negative relationship between public ownership and earnings management. The authors feel, however, that the results strongly reflect the specific nature of the Chinese market, where weaker and less developed private companies feel a greater need to present positive results.

Wang and Yung (2011), through an analysis of 557 listed Chinese companies between 1998 and 2006, also found evidence of a negative relationship between state owned enterprises and earnings management. In particular, the authors demonstrated that discretionary accruals decrease as public ownership increases, but this correlation disappears after 2002 with the advent of the free market. The authors believe that the negative relationship between public ownership and earnings management is not completely linked to a particularly efficient company management, but instead to two environmental specifics: a) the role of the Chinese government in dissuading opportunistic behaviour within public owned enterprises; b) the particular type of protection afforded to publicly owned companies that evidently reduces the pressure on economic results. In this case, the authors again evidence the impossibility of exporting such results to different contexts, because of the heavy conditioning deriving from the absolute typicality of the Chinese market and, above all, the regulations established for listing and delisting public companies within this market. Due to this market typicality, the authors concluded their study with a specific call for future research and advocated that similar research studies should be undertaken in other countries.

Capalbo *et al.* (2014) responded to the call, using unlisted Italian public service companies as the study reference, where they find a negative relationship in the sense that earnings management activities appear to reduce with an increase in the percentage of public ownership. The analysis used a sample of 5,349 companies and studied annual budget sheets issued over a four-year period between 2009 and 2012. The sample contained 1,457 State owned entities (SOE) with at least 30% of shares being public property, and 3,892 private owned entities (POE) where public owned shares were under 30%, and earnings management was calculated for all companies for the three-year period between 2010-2012. Earnings management activities were measured using a model developed by Stubben (2010) based on investigation of the adopted alterations and consequent gains. The author holds that revenues are an ideal component to measure the instrumental use of discretion, since they are one of the main balance sheet items and anticipated or postponed measurements, or those that are not in line with the GAAP, can generate significant profit variations in the direction the budget editors hoped for. To measure the effects of these instrumental measurements, Stubben (2010) proposed a model that compares the credit variations with revenue variations and, after checking the model to also take into account a number of variables such as the size and age of the company, profitability and sector, went on to measure earnings management on the basis of unexpected or abnormal receivables. The results evidence how earnings management activities are generally less intense in privately owned companies and are negatively related to public ownership. In addition, the results show that such activities decrease with company growth and increase with greater profitability. As it is limited to a single national reality, the work is of course affected by possible influences inherent to the regulatory environment, as well as any limitations resulting from the specific nature of the utilities sector, and particularly the intense relationships which companies in this sector may have with the public administrations holding the shares, including commercial transactions. However, the results are of particular importance for two reasons: a) the choice of public service sector gives a relatively homogeneous population of companies with which to analyse the impact that public ownership may have on the frequency and extent of earnings management activities, and provides a useful benchmark regarding the behaviour of competing private companies (Tan 2002); b) the study

refers to unlisted companies and therefore allows the analysis to be isolated from the effects that company listing may have on earnings management activities, as mentioned above.

The negative relationship between public ownership and earnings management is also confirmed in a study on Vietnamese listed companies carried out by Hoang *et al.* (2014), in which the behaviour of 150 listed companies between 2005 and 2011 was considered, and earnings management measured in terms of the quality of accruals (Dechow and Dichev 2002). In this case, the authors also divided the study population into two panels based on the percentage of shares in public ownership, establishing 30% as the distinguishing point between SOEs and private companies, arriving at a total of 71 and 79 bodies respectively. The results, which were obviously affected by the small size of the sample, veer toward a negative relationship between public ownership and earnings management.

4.2 Studies Supporting a Positive Relationship between Earnings Management and State Ownership

Less numerous, but no less relevant, are the studies that conclude by confirming the existence of a positive relationship. Guo and Ma (2015) measured earnings management in 1,176 listed Chinese companies between 2004 and 2010 through the use of the Dechow and Dichev (2002) model that permits an accrual quality evaluation of relative to cash flow trend. The authors believe that earnings management is favoured in the SOEs context by the number and variety of interests held by representatives of public companies at different ownership levels, and this interpretation is supported by a reduction in earnings management when central government is the principal shareholder. Analogous results were seen by Chen *et al.* 2008 when analysing the behaviour of all Chinese listed companies between 1994 and 2000 by measuring earnings management via the frequency by which the ROE is placed just under established regulatory borderlines. They concluded that there was a positive relationship between public shareholders and earnings management activities, above all when dealing with local administrations. The authors stress the direct interest that local politicians may often have regarding the results of companies that are either controlled by their administrations or represented by the success that these companies achieve, especially when dealing with listed companies that are in line with the personal interests of the local politicians. Positive relationships have also been found outside China. Ben-Nasr *et al.* (2015) analysed 250 companies in different countries with reference to those that had been recently privatised, and found that when governments were permanent shareholders there was an increase in earnings management activities. This is the so-called *political interference hypothesis* according to which the State has greater incentives to reduce budget quality in order to hide the effects of potential tunnelling activities put in place to promote the destination of corporate resources to political objectives. In other words, when the State retains ownership of privatised companies, it does so for ulterior political reasons and the investments are more easily hidden in lower quality balance sheets. Evidence of a positive relationship has also been found in Italy. Poli (2015) published a study conducted on a sample of 13,724 unlisted companies working in different sectors between 2012-2014 and measuring earnings management through the results distribution method developed by Burgstahler and Dichev (1997). The author concludes by confirming the existence of a positive relationship between public ownership and earnings management. Commenting on the difference between the results achieved in the previous research of Capalbo *et al.* (2014), the author believes that due to the different methodology adopted, the results definitely suffer from the lower level of efficiency of Italian public companies and the desire to avoid the considerations that overly positive or negative results may raise both in public opinion and in higher levels of government (Poli 2015).

5. Conclusions

To summarise, the available literature seems to offer contrasting viewpoints regarding the relationship between public ownership and *earnings management*, even though studies generally show a slight prevalence towards a negative relationship. *This means that the quality of the earnings published in the budgets of public owned enterprises must be slightly higher than the earnings published by private companies.* Almost all studies, however, present limitations that hinder the assumption of general rules regarding the obtained results. It must be remembered that many are linked to a Chinese context, which for multiple reasons has unique characteristics. Many others are linked to the experience of single national contexts that while less peculiar than the Chinese ones, still exhibit a high level of typicality. Still others, even when referencing global contexts, are related to exceptional events such as privatisation or listing. Last but not least, the different studies do not always use the same system to measure *earnings management* activities, as illustrated in the following table.

Table 1. Synopsis of the results attained by literature on the subject of the relationship between earnings management and public ownership

Authors	Sample Population	EM measurement system	Earnings Management and public ownership relationship
Aharony <i>et al.</i> (2000)	83 Chinese state owned companies before and after initial public offerings, carried out between 1992 and 1995	Increase of ROA in the IPO year	Not specifically analysed
Ding <i>et al.</i> (2007)	142 privately owned companies with the same number of publicly owned companies for 2001 and 2002	<i>discretionary accruals</i> using Jones model (1991) and the <i>non-operating income/sales</i> relationship used to measure the effect of <i>non-market-based non-operating related party transactions</i>	Negative
Cheng <i>et al.</i> (2015)	437 companies, 177 public and 260 private, between 2003 and 2009	<i>discretionary accruals</i> using a <i>modified Jones model</i>	Negative
Wang and Yung (2011)	557 Chinese listed companies between 1998 and 2006	<i>discretionary accrual</i> using a <i>modified Jones model</i>	Negative up to 2002 (year of the free market)
Capalbo <i>et al.</i> (2014)	5,349 companies, including 1,457 State owned entities (SOE), for the period 2010-2012	<i>discretionary receivables</i> using the <i>Stubben model (2010)</i>	Negative
Hoang <i>et al.</i> (2014)	150 Vietnamese listed companies between 2005 and 2011	<i>abnormal accruals</i> using the Dechow and Dichev model (2002)	Negative
Guo e Ma (2015)	1,176 Chinese listed companies between 2004 and 2010	<i>accruals</i> quality based on Dechow and Dichev model (2002)	Positive
Chen <i>et al.</i> (2008)	All Chinese listed companies between 1994 and 2000	Positioning ROE just under determined <i>regulatory borderlines</i>	Positive
Poli (2015)	13,724 companies for the period 2012-2014	results distribution method developed by Burgstahler and Dichev (1997)	Positive
Ben-Nasr <i>et al.</i> (2015)	250 international companies subject to recent privatisation during the period 1990-2000	<i>abnormal accruals</i> determined on the basis of the Dechow and Dichev model (2002) as modified by Ball and Shivakumar (2005) to include the effects of <i>timely loss recognition</i>	Positive

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Notes

Note 1. Warfield et al. (1995) analysed the behaviour of 1,600 companies and discovered that discretionary accruals in companies with a degree of managerial ownership under 5% was practically double the amount traceable in companies with a degree of managerial ownership greater than 35%.

Note 2. Successive studies have confirmed the existence of earnings management activities in Chinese companies in occasion of initial public offers. Using a sample of 185 companies listed on the Shanghai Stock Exchange during the period 1999-2001, Aharony et al. (2010) have shown that related-party transactions are used to inflate the results during the periods preceding the IPO and that motivation increases due to the prospect of tunnelling activities used to exploit the resources of minority shareholders for the benefit of the parent company.

Note 3. On the theme of IPO in the Chinese context, Chen et al. (2013) demonstrate that the positive effect that is normally exerted by underwriters on the quality of company balance sheets exists only in cases of listed private companies and is much less in the cases of public owned companies.

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