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**Board composition and performance in State-Owned Enterprises:
evidence from the Italian public utilities sector**

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Abstract

State-Owned enterprises are likely to suffer more severe agency problems than other firms. First, they undergo a “double agency” problem because an agent, who will usually be a politician with his own agenda, will represent the state’s interests in the company. Second, they also suffer a “common agency” problem, because they are overseen by several levels of government, or by both the state and minority shareholders with potentially conflicting interests, which may be inconsistent with profit maximization. To make matters worst, they usually operate in non-competitive industries and therefore they do not benefit from the discipline of market pressure in case of underperformance. All of these problems imply that good corporate governance can make a great difference for these firms.

This paper analyzes the effect of board composition on the behavior of the Italian public utilities. We use a newly collected panel of 114 Italian public utilities including data on their 1630 directors during the period 1994-2004. This period is particularly interesting because of the legal changes that forced many of these firms to alter their juridical form and allow the entrance of private investors. We investigate whether the changes in board composition were accompanied by changes in decisions about employment and analyze their ultimate effect on performance.

Our main findings indicate that politically connected directors, most of them representing the state or the local municipality’s ownership, dominate boards of directors in the Italian public utilities all throughout the period. The presence of politicians on the

boards of these companies seems to have a positive and significant effect on employment but this is not reflected in differences in performance. Independent directors have an ambiguous role thus suggesting the need for a further specification of directors profile or a tighter definition of independence.

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Introduction

Board composition is a highly studied topic in relation to private firms but have received little attention in the context of State-owned enterprises (SOEs). One reason is that the debate on corporate governance has traditionally concerned widely held firms operating in market economies while firms with concentrated and well identified ownership, such as SOEs and family firms, or firms operating in non-competitive environments, like in developing countries, have been set aside. Another reason is that the traditional dichotomy between atomic shareholders and controlling managers does not apply to SOEs where executives are nominated by a public entity who usually holds a great enough stake to ensure real control rights and establish absolute priorities. Nevertheless, SOEs are likely to suffer more severe agency problems than private firms. They are affected by a “common agency” problem when they are overseen by several levels of government, for example by a local government which owns them and the sovereign state, or by both the state and minority shareholders with potentially conflicting interests. SOEs might also encounter a “double agency” problem for the divergencies that might arise between managers and controlling body, on one hand, and between politicians and the ultimate owners of the firm, the citizens, on the other. Recent studies on transition and developing economies has paid dedicated attention to the corporate governance issues and the same approach has been embraced at the institutional level: the World Bank (2006) says that “fundamental problems in the governance of SOEs explain much of the poor performance of SOEs (page

3)” and the OECD (2005) that “the boards of state-owned enterprises should have the necessary authority, competencies and objectivity to carry out their function of strategic guidance and monitoring of management”, thus recognizing to board composition a role. In this paper we ask three main questions: does board composition matter in firms with concentrated, namely state, ownership? In these firms, what is the impact of board characteristics on profitability and labor demand? What is the role of independent directors?

We investigate the relationship between board composition and employment, on one hand, and board composition and performance, on the other, by means of a newly hand-created dataset of 114 Italian public utilities during the period 1994-2004. In analogy to what happened in the traditionally state-dominated sectors in many OECD countries, a deep transformation of the institutional and industrial environment took place during this decade in Italy. Public utilities was interested by a legislative change implying the progressive separation of public welfare and policy functions from the commercial ones, the introduction of competition elements in the retail segment and the regulation of the access to the market segments requiring significant investments by means of auctions. At the same time, Italian public utilities have been accompanied throughout a transformation in their juridical form toward institutional designs consistent with the participation of private investors and with the functional separation of operations from direction. From the initial status of “Azienda Municipalizzata”, autonomous legal entity emanating de facto from the sovereign government, with a board of directors directly nominated by the state owner and called “Commission”, firms have sometimes changed into a transitional juridical form called “Azienda Speciale” whose management enjoyed a greater control over the firm strategy. Firms could have directly transformed into limited companies with a proper board of directors in which both public and private entities could invest. Today limited companies represent the absolute majority of the Italian public utilities.

The theoretical premises are stated in section 1 [...]. We describe the data set and the definition adopted for identifying board composition in section 2. We test the relevance of board composition for firm level employment in section 3 and compare the results

when profitability is under investigation in section 4. We discuss the results in section 5. Despite the evolution of the legal and industrial framework, Italian public utilities are still controlled by state entities and their boards dominated by politicians. Nevertheless, the proportion of directors with different profile matters, although the results cast some doubts on the reliability of the independence attribute.

2. Definitions and data description

We define board composition based on the political affiliation of directors, their independence, the status of insider or outsider and their role. Politically-connected directors may be identified by their present or past activity in the political arena, as represented by a political charge, the membership to a political party, the candidacy for election. A director could be involved in the political arena even when none of the previous conditions is met (through relatives, for example). Faccio (2002) says directors are politically connected when they are member of parliament, heads of state, associated or close to a political party or when their relatives or close friends are. We consider as politically connected directors holding a seat in the parliament or in the Municipal, Province or Regional government at the same time as a seat in the board or before, directors affiliated to a political party and whose relationship with political parties is well-known. The reason for considering political connections at a lower level than in Faccio (2002) is twofold: first, a public utility's stakeholders are generally located in a restricted geographic area, so that connections are important at a very local level; second, our focus is on board components and their objective function so that we want to capture all possible sources of influence and motivations. Other types of political affiliation might exist, for example through the director's primary occupation or the director's academic background (like in Agrawal and Knoeber (2001), where directors are considered as politically connected if they hold a degree in Law, for their utility in case the firm is sued by shareholders).

We do not include in the political connection the director's family or friends' connection, because the territorial operational range of the sample firms and their directors makes the information difficult to find and to prove. We also exclude the director's degree, because it does not seem an important variable in the Italian context. We include well documented but unofficial connections and, on the contrary of Faccio (2002), we do not distinguish them from the connections identified by more objective criteria, because the directors in this category are only few and in general they have previously covered executive positions in other SOEs.

We define as outsiders directors who are not current employees of the firm, so that they might also be one of the top officers, typically the President, if they have no executive powers. In public utilities the Presidency is sometimes the investiture of a person of known experience and authority or otherwise an honorary charge given to a civil servant as a recognition of his past service. In consequence independence is not excluded by the officer position in the firm. For independence, we rely on the "Codice di autodisciplina" (2006) issued by the Committee for corporate governance of listed firms of the Italian Stock Exchange¹: "A convenient proportion of non-executive directors is represented by independent directors, who must not be involved in any economic relationship with the firm, its executive directors and its shareholders, cannot execute control or relevant influence over the firm and are not relatives of anyone in such a positions (page 21)." The definition is consistent with Fields and Keys (2003) for whom directors are independent in "absence of any supplier, customer, interlocking, or potential competitor relationships" with the firm. Listed companies in the sample say their directors are independent or not according to the "Codice di autodisciplina" and sometimes non-listed companies do the same in their balance sheet or chart. We fill the missing information for non-listed companies by applying the same criterion to their directors. Some directors are said to be independent even if they act as officers in the public entity controlling the firm. In these cases we preserve the firm indication and say the director is (politically connected

¹ Our definition of outsiders is consistent with the "Codice di autodisciplina", where independent directors must be non executive and the President is not independent if he has managerial or strategic power. We also correctly have that independent directors cannot be insiders.

and) independent. Outside directors are not qualified on the basis of their inside stock ownership because most Italian public utilities are totally owned by a local or central government and this category is irrelevant. Eventually, inside ownership concerns family firms and the directors' affiliation to the owner make them not independent while the inside or outside attribute depends on their role.

2.1. Data set and summary statistics

The data set includes economic, technical and governance variables of 114 Italian public utilities surveyed annually in 1994-2004. The sample firms operate at local and national level in the gas, electricity and water production, distribution and sale and they are representatives of the sector for number, geographical distribution and dimension. Some of them are active in more than one industry, then being “multiutilities” and 9 out of 114 firms are listed at the Italian Stock Exchange. Federutility, the Italian federation of local water and energy utilities, lists 515 associates² but the number includes the operating firms, their affiliates, the entrepreneurial shareholders, the local governments and engineering enterprises involved in the sector of activity. The data set is unbalanced, for a total of 838 firm-year observations and 1630 board directors. One reason for the unbalanced nature of the dataset are the corporate finance operations, namely mergers or alienations, that made some firms to disappear and others to appear at a point in time, another reason is the lack of primary source of information, the balance sheets. The completion of the data set has spread over several years. The research centers Ceris-CNR and HERMES in Moncalieri (Italy) provided the initial data set, including technical and economic data retrieved from the paper balance sheets and from questionnaires sent to the firms. When missing, the economic information has been searched for in the electronic databases AIDA and Osiris or the original balance sheets requested to the Court where they were supposedly deposited for legal and fiscal requirements: unluckily, this search has permitted to fill much but not all the missing values. Nevertheless, the data set is not

² Data at November 2007 from the Federutility's website.

strongly unbalanced, and, most important for the validity of results, the missing values are randomly distributed.

Information on governance was not included in the original datasets and makes this dataset unique. It includes: the juridical form, the biggest three shareholders' identity, the percentage of equity they own, the name of directors, their charge in the board, their political connection, if any, their position as inside, outside or independent directors as declared in the firm chart or deducted from their role and curriculum. For most of the companies being unlisted, the main source of information was the paper balance sheets but for some details, such as the directors independence, or when the balance sheets were not available, alternative sources helped: AIDA, Osiris, the firms' websites, the firms themselves, through interviews, and the Internet. Two additional sources were useful for listed companies: Consob (Commissione Nazionale per le Società e la Borsa, the public authority responsible for regulating the Italian securities market) and the Italian Stock Exchange's websites. Companies with the "Azienda Municipalizzata" juridical form do not have a proper board of directors but an "administrative commission" nominated by the local government who controls it, and the board components were not always reported in the balance sheets. Despite these difficulties, only 17 out of 838 board-year data, corresponding to the boards of six different firms, are missing.

In order to identify the political connected directors, we proceeded by steps, by addressing the sources of information from the least to the most sensitive. In principle, in Italy the membership to a political party and the extra-parliament political charges are public information. We contacted some Italian political parties and asked for the list of their affiliates but received no help, for the declared reason that there is no available database with those records. We run the biographical research on the electronic databases FACTIVEA, LEXIS-NEXIS, ABI Inform (press release) and the Who's Who in Italy. Even if directors in the list showed up in those databases, there was almost no useful information about their political affiliation. We kept in touch with ANSA, the most important press agency in Italy, who did not have the information either. Then, we considered

<i>Variable</i>	<i>25%</i>	<i>Median</i>	<i>75%</i>	<i>Mean</i>	<i>St.Dev</i>
<i>ROA</i>	0.014	0.034	0.057	0.037	0.037
<i>ROE</i>	0.026	0.088	0.156	0.120	0.172
<i>ROI</i>	0.021	0.051	0.090	0.069	0.097
<i>assets ('000 euro)</i>	24,225	65,325	187,077	264,619	668,351
<i>n</i>	54	168	413	505.7	1294.3
<i>sales ('000 euro)</i>	11,625	27,571	85,907	96,910	221,688
<i>board</i>	5	7	7	6.28	2.72
<i>polit</i>	4	6	7	5.66	2.55
<i>indep</i>	0	0	2	1.44	2.13
<i>out</i>	4	6	6	5.13	2.64

Table 1. Descriptive statistics

ROA is the return on assets, *ROI* is the return on invested capital, *ROE* is the return on equity, *asset* represents the firm total assets, *n* the number of employees, *sales* the revenues, *board* is the board size, *indep* is the number of independent directors, *polit* is the number of politically connected directors, *out* is the number of outside directors.

interviewing the board members and sent a meeting request to a small sample of 12 firms, selected from the biggest ones. Four of them answered³. This made us lay down the idea to send questionnaires to the firms asking for their directors' political connection. The last resort was Internet, where we found most of the information. By putting the information together, we can tell the political connection of all the 1630 directors with a high degree of confidence.

Table 1 summarizes some descriptive statistics for the profit ratios, the dimensional variables and board composition. *ROA* is computed as EBIT, earning before interest and tax expenses, equivalent to the operating profit, over total asset, *ROI* as EBIT over capital invested as the sum of equity and financial debt and *ROE* is the proportion of Net Income over equity. On average, board are composed by less than six persons, and sometimes all of them are politicians. Outside directors are as common as politicians, but

³ They are AGSM Verona, AEM Milano, IRIDE (born from the integration of AEM Torino and AMGA Genova), ASEC Catania.

	<i>board</i>	<i>polit</i>	<i>indep</i>	<i>out</i>	<i>%polit</i>	<i>%indep</i>	<i>%out</i>
<i>board</i>	1.0000						
<i>polit</i>	0.9151 <i>0.0000</i>	1.0000					
<i>indep</i>	0.3960 <i>0.0000</i>	0.2699 <i>0.0000</i>	1.0000				
<i>out</i>	0.9700 <i>0.0000</i>	0.9129 <i>0.0000</i>	0.3644 <i>0.0000</i>	1.0000			
<i>%polit</i>	-0.0475 <i>0.1736</i>	0.3379 <i>0.0000</i>	-0.2025 <i>0.0000</i>	-0.0015 <i>0.9659</i>	1.0000		
<i>%indep</i>	0.1981 <i>0.0000</i>	0.0878 <i>0.0118</i>	0.9168 <i>0.0000</i>	0.1893 <i>0.0000</i>	-0.2148 <i>0.0000</i>	1.0000	
<i>%out</i>	0.6226 <i>0.0000</i>	0.5907 <i>0.0000</i>	0.2081 <i>0.0000</i>	0.7159 <i>0.0000</i>	-0.0479 <i>0.1706</i>	0.2127 <i>0.0000</i>	1.0000

Table 2. Correlation matrix for board composition

Pearson correlations between board characteristics: *board* is the board size, *polit* is the number of politically connected directors, *indep* is the number of independent directors, *out* is the number of outside directors, *%polit* is the fraction of politically connected directors, *%indep* is the fraction of independent directors, *%out* is the fraction of outside directors. P-values in italic.

	<i>ROA</i>	<i>ROE</i>	<i>ROI</i>	<i>assets</i>	<i>n</i>	<i>sales</i>
<i>board</i>	0.0081 <i>0.8159</i>	-0.0257 <i>0.4620</i>	-0.0785 <i>0.0246</i>	0.1343 <i>0.0001</i>	0.1153 <i>0.0009</i>	0.0948 <i>0.0066</i>
<i>polit</i>	-0.0653 <i>0.0613</i>	-0.0569 <i>0.1032</i>	-0.1550 <i>0.0000</i>	0.0678 <i>0.0523</i>	0.0510 <i>0.1442</i>	0.0427 <i>0.2216</i>
<i>indep</i>	0.0393 <i>0.2611</i>	-0.0618 <i>0.0769</i>	-0.0219 <i>0.5315</i>	0.3052 <i>0.0000</i>	0.2590 <i>0.0000</i>	0.2416 <i>0.0000</i>
<i>out</i>	-0.0421 <i>0.2283</i>	-0.0353 <i>0.3118</i>	-0.1156 <i>0.0009</i>	0.1542 <i>0.0000</i>	0.1341 <i>0.0001</i>	0.1187 <i>0.0007</i>
<i>%polit</i>	-0.2135 <i>0.0000</i>	-0.1487 <i>0.0000</i>	-0.2920 <i>0.0000</i>	-0.1153 <i>0.0009</i>	-0.1255 <i>0.0003</i>	-0.0848 <i>0.0151</i>
<i>%indep</i>	0.0181 <i>0.6043</i>	-0.0545 <i>0.1188</i>	-0.0346 <i>0.3218</i>	0.2753 <i>0.0000</i>	0.2411 <i>0.0000</i>	0.2085 <i>0.0000</i>
<i>%out</i>	-0.0250 <i>0.4739</i>	0.0268 <i>0.4436</i>	-0.0777 <i>0.0260</i>	0.1127 <i>0.0012</i>	0.1035 <i>0.0030</i>	0.1167 <i>0.0008</i>

Table 3. Correlation matrix for firm characteristics

Pearson correlations between profit ratios, measure of firm dimension and board characteristics: *ROA* is the return on assets, *ROI* is the return on invested capital, *ROE* is the return on equity, *asset* represents the firm total assets, *n* the number of employees, *sales* the revenues, *board* is the board size, *indep* is the number of independent directors, *polit* is the number of politically connected directors, *out* is the number of outside directors, *%polit* is the fraction of politically connected directors, *%indep* is the fraction of independent directors, *%out* is the fraction of outside directors. P-values in italic.

most of them are not independent. Table 2 attests the dominance of politicians in the board but their incidence decreases as the number of independent in the board goes up. Table 3 shows a positive correlation between board size and firm dimension, consistently with the institutional features of the firms. The incidence of politicians in the board negatively affects the profit ratios and the dimensional variables *assets*, *n*, *sales*. On the contrary, the percentage and the level of independent and outside directors is positively correlated with the dimension of the firm which is somehow puzzling. We will test these relations in the followings paragraphs.

3. Firm-level employment and board of directors in the Italian public utilities

The political view of SOEs (Shapiro and Willig, 1990; Shleifer and Vishny, 1994) have legitimated the idea that SOEs are over-staffed and bureaucrats do not pursue any social objectives but consensus solely. We investigate this hypothesis by studying the relation between board dimension and composition, on one hand, and the number of employees in the firms, on the other. The level of employment in firms controlled by a political body who holds effective control like in the Italian public utilities might expand for political reasons. The trend might be stronger if the board is dominated by politicians representing various stakeholders and interests. In a profit-maximizing firm independent directors would be expected to contrast the expansion of employment when it is pursued at the expense of profitability. In a context where board objectives and the profile of directors are not clear the same is not necessarily true.

3.1. Board dimension

The first hypothesis we want to test concerns the nature of the relationship between board size and labor demand. The direct correlation between the two variables might suggests a positive effect of board size on employment, which might nevertheless include an indirect effect working through firm dimension. In case the positive effect persists after controlling for firm size, the direction of causality must be assessed. Firms with large headcount might need dedicated policies and expertises to be represented in the

board, and big firms are more closely monitored by the shareholders through the board, so that board size does depend on employment. We therefore treat board dimension as potentially endogenous.

We apply the “bounding procedure” (Bond, 2002) to the following model:

$$n_{it} = \alpha_1 n_{it-1} + \beta_1 w_{it} + \beta_2 w_{it-1} + \beta_3 k_{it} + \beta_4 k_{it-1} + \beta_5 board_{it} + \lambda_t + \eta_i + v_{it} \quad (1)$$

where n_{it} is the logarithm of employment in company i at the end of corresponding year, w_{it} is the logarithm of average wage, k_{it} is the logarithm of firm gross capital (as the sum of total financial dept and equity), $board_{it}$ is the number of directors sitting in the board at time t , λ_t is a time effect common to all firms, η_i is a permanent but non-observable firm specific effect, and v_{it} is the error term. Variables k_{it} and w_{it} are treated as endogenous, as well as $board_{it}$. A theoretical interpretation for the model in 1, without the governance variable, is in Arellano, Bond (1991). With the inclusion of k_{it} in the model we isolate the effect of firm size on employment so that the positive correlation between board and firm dimension displayed in Table 3 is taken away. Table 4 shows the results⁴.

The coefficients have the expected sign and they are significant: the coefficient of $board_{it}$ is positive and significant at a 5% level, assigning a positive effect of board dimension on the level of employment. The coefficient of the lagged employment in the two-step GMM-sys estimate falls inside the interval delimited by the OLS and the Within Group coefficients. The two-step GMM-sys estimate neglects the presence of second order correlation in the first difference of the error term (AR(2) p -value > 0.10), so that the GMM estimator may be relied on. The difference-in-Hansen test still fails to reject the hypothesis that the additional moment conditions are valid.

⁴ All estimates are performed using the `xtabond2` procedure in Stata developed by Roodman (2005). In all cases the two step estimates are reported with the finite sample correction of the variance covariance matrix suggested by Windmeijer (2005).

Independent variables	(1) OLS	(2) Within Group	(3) GMM-sys	(4) GMM-sys2
n_{it-1}	0.954***	0.763***	0.821***	0.826***
	0.0131 <i>0.000</i>	0.0152 <i>0.000</i>	0.0612 <i>0.000</i>	0.0658 <i>0.000</i>
w_{it}	-0.621***	-0.645***	-0.798***	-0.876**
	0.1372 <i>0.000</i>	0.1355 <i>0.000</i>	0.1667 <i>0.000</i>	0.1409 <i>0.000</i>
w_{it-1}	0.576***	0.459***	0.611***	0.626***
	0.0892 <i>0.000</i>	0.0626 <i>0.000</i>	0.0928 <i>0.000</i>	0.1348 <i>0.000</i>
k_{it}	0.153***	0.132***	0.206***	0.201**
	0.0418 <i>0.000</i>	0.0383 <i>0.001</i>	0.0751 <i>0.006</i>	0.0913 <i>0.028</i>
k_{it-1}	-0.105***	-0.0397**	-0.076	-0.080
	0.0353 <i>0.002</i>	0.0823 <i>0.032</i>	0.0525 <i>0.147</i>	0.0575 <i>0.166</i>
$board_{it}$	-0.000	0.018***	0.033***	0.030**
	0.0032 <i>0.819</i>	0.0057 <i>0.002</i>	0.0120 <i>0.006</i>	0.0139 <i>0.032</i>
AR(2)			-1.70	-1.642
AR(2) p -value			0.088	0.101
Hansen $\Pr > \chi^2$			1.000	1.000
Hansen df			139	110
Difference Hansen $\Pr > \chi^2$			0.815	0.796
No. observations	699	699	699	699
Time dummies	yes			
Sample period	1994-2004			
No. firms	114			

Table 4. Employment and board dimension

3.2. Board composition

First, we are interested in knowing the influence exerted on the employment strategy by the politicians in firms that are different for juridical form and sector. Table 5 shows the bounding procedure applied to the model in 1, where the variable $board_{it}$ has been substituted for $polit_{it}$, the number of politicians sitting on the board at time t . We think that politically connected directors have a word in deciding a public utility's employment and we want to test the effect of their decision on the firm strategy. The number of politicians sitting on the board may depend on the firm size, its juridical form, ownership structure and industry. We stay open to the possibility that the variable $polit_{it}$ is endogenous to the mechanism governing employment and we apply the bounding procedure in analogy to what we did with board size. We estimate the model:

$$n_{it} = \alpha_1 n_{it-1} + \beta_1 w_{it} + \beta_2 w_{it-1} + \beta_3 k_{it} + \beta_4 k_{it-1} + \beta_5 polit_{it} + \lambda_t + \eta_i + v_{it} \quad (2)$$

The number of politicians sitting on the board of firm i at time t , $polit_{it}$, has a positive impact on the level of employment and it is significant at a 5% level, after controlling for the lagged employment and for wage, capital and their first lags. The Arellano-Bond test for second-order autocorrelation in the residual fails to reject the absence of second order autocorrelation, the difference-in-Hansen test fails to reject that the instrumental variables (time dummies and appropriate lags for the regressors) are exogenous. The model is well specified and confirm our hypothesis on the influence of politicians over firm level of employment.

We verify whether the same is true for the number of independent and outside directors, then testing the alternative models:

$$n_{it} = \alpha_1 n_{it-1} + \beta_1 w_{it} + \beta_2 w_{it-1} + \beta_3 k_{it} + \beta_4 k_{it-1} + \beta_5 indep_{it} + \lambda_t + \eta_i + v_{it} \quad (3)$$

Independent variables	(1) OLS	(2) Within Group	(3) GMM-sys	(4) GMM-sys2
n_{it-1}	0.954***	0.762***	0.821***	0.827***
	0.0132 <i>0.000</i>	0.0150 <i>0.000</i>	0.0777 <i>0.000</i>	0.0797 <i>0.000</i>
w_{it}	-0.621***	-0.647***	-0.880***	-0.931***
	0.1370 <i>0.000</i>	0.1350 <i>0.000</i>	0.1544 <i>0.000</i>	0.1501 <i>0.000</i>
w_{it-1}	0.576***	0.456***	0.622***	0.638***
	0.0891 <i>0.000</i>	0.0633 <i>0.000</i>	0.0937 <i>0.000</i>	0.1024 <i>0.000</i>
k_{it}	0.145***	0.128***	0.215**	0.209**
	0.0418 <i>0.001</i>	0.0386 <i>0.001</i>	0.0865 <i>0.013</i>	0.1059 <i>0.049</i>
k_{it-1}	-0.105***	-0.085**	-0.093	-0.093
	0.0352 <i>0.003</i>	0.0397 <i>0.034</i>	0.0596 <i>0.120</i>	0.0672 <i>0.167</i>
$polit_{it}$	0.000	0.016***	0.028**	0.027**
	0.0028 <i>0.889</i>	0.0058 <i>0.006</i>	0.0135 <i>0.041</i>	0.0112 <i>0.016</i>
AR(2)			-1.709	-1.647
AR(2) p -value			0.087	0.100
Hansen $\text{Pr} > \chi^2$			0.998	0.998
Hansen df			110	110
Difference Hansen $\text{Pr} > \chi^2$			0.673	0.673
No. observations		576	699	699
Time dummies	yes			
Sample period	1994-2004			
No. firms	114			

Table 5. Employment and politicians

$$n_{it} = \alpha_1 n_{it-1} + \beta_1 w_{it} + \beta_2 w_{it-1} + \beta_3 k_{it} + \beta_4 k_{it-1} + \beta_5 out_{it} + \lambda_t + \eta_i + v_{it} \quad (4)$$

where the governance variables $indep_{it}$ and out_{it} are treated as endogenous for the reasons previously exposed. Table 6 compares column (4) in Table 5, the two-step GMM-sys estimate in which the governance variable is $polit_{it}$, with the two-step GMM-sys estimate for model 3 and 4.

The variables of interest, $indep_{it}$ and out_{it} are both significant at a 5% level, with a positive sign. The interpretation of the sign is not obvious. In firms with dispersed, private ownership, the presence of independent and outside directors are expected to signal strong governance, for the monitoring role exerted by those directors on the management. NYSE (since 1978) and the NASDAQ (since 1989) require companies whose stock is traded on their exchanges to have at least two outside directors on their corporate boards. This requirement suggests that some unaffiliated monitoring is considered necessary to safeguard or advance shareholders' interests. According to the Italian "Codice di Autodisciplina" for listed companies, outside directors should be relevant for the board decisions by virtue of their number and authority. Their opinion is particularly important when the executives' interests are not aligned with the shareholder's, for they are external to the firm daily management. In firms with concentrated ownership, some directors should be independent from the blockholder, in order to guarantee the board autonomy with respect to the controlling shareholders. The transformation of Italian public utilities from municipal firms into special firms before and into limited companies afterwards has given to the board increasing power, at least nominally. Since board composition and function varies across juridical form, it is worth testing whether $polit_{it}$, out_{it} and $indep_{it}$ are still significantly related to n_{it} when the juridical form is taken into consideration. In the next section we will investigate the impact of board composition and juridical form on profitability, so as to clarify the board objective function. We test the following models:

Independent variables	(4) GMM-sys2	(5) GMM-sys2	(6) GMM-sys2
n_{it-1}	0.827***	0.855***	0.883***
	0.0797 0.000	0.0873 0.000	0.0553 0.000
w_{it}	-0.931***	-0.974***	-0.686***
	0.1501 0.000	0.1063 0.000	0.1499 0.000
w_{it-1}	0.638***	0.689***	0.752***
	0.1024 0.000	0.0819 0.000	0.1397 0.000
k_{it}	0.209**	0.164**	0.137*
	0.1059 0.049	0.0715 0.022	0.0701 0.051
k_{it-1}	-0.093	-0.068	-0.051
	0.0672 0.167	0.0692 0.324	0.0571 0.371
$polit_{it}$	0.027**		
	0.0112 0.016		
$indep_{it}$		0.025**	
		0.0112 0.025	
out_{it}			0.0324**
			0.0143 0.023
AR(2)	-1.647	-1.54	-1.62
AR(2) p -value	0.100	0.124	0.105
Hansen $\text{Pr} > \chi^2$	0.998	0.989	0.498
Hansen df	110	88	85
Difference Hansen $\text{Pr} > \chi^2$	0.673	0.980	0.233
No. observations	699	699	699
Time dummies	yes		
Sample period	1994-2003		
No. firms	114		

Table 6. Employment and politicians, independent and outside directors

$$n_{it} = \alpha_1 n_{it-1} + \beta_1 w_{it} + \beta_2 w_{it-1} + \beta_3 k_{it} + \beta_4 k_{it-1} + \beta_5 polit_{it} + jurform_{it} + \lambda_t + \eta_i + v_{it} \quad (5)$$

$$n_{it} = \alpha_1 n_{it-1} + \beta_1 w_{it} + \beta_2 w_{it-1} + \beta_3 k_{it} + \beta_4 k_{it-1} + \beta_5 indep_{it} + jurform_{it} + \lambda_t + \eta_i + v_{it} \quad (6)$$

$$n_{it} = \alpha_1 n_{it-1} + \beta_1 w_{it} + \beta_2 w_{it-1} + \beta_3 k_{it} + \beta_4 k_{it-1} + \beta_5 out_{it} + jurform_{it} + \lambda_t + \eta_i + v_{it} \quad (7)$$

where $jurform_{it} = \beta_6 AzMun_{it} + \beta_7 AzSpec_{it} + \beta_8 SocK_{it}$ and $AzMun_{it}$, $AzSpec_{it}$, $SocK_{it}$ stand for municipal firm, “special” firm and limited firm respectively, and they are considered exogenous. In the estimate, one juridical form is dropped because of collinearity. Results of the two-step GMM-sys estimate are presented in Table 7.

When we control for the juridical form, $polit_{it}$, $indep_{it}$ and out_{it} are still positive and significant at 10% (the first two) and 5% (the latter) level. The Arellano-Bond test fails to reject the absence of second order autocorrelation in all the three specifications and the difference-in-Hansen test for the exogeneity of the instruments attests that the model is correctly specified. Juridical form is never significative: we obtain that in Italian public utilities employment increases with the number of politically connected, independent, outside directors sitting on the board, regardless the constraints and obligations imposed by the juridical form. As far as politically connected directors are concerned, the result is an important confirmation of a stylized fact about the behavior of state firms, traditionally over-employed, as argued by Boycko et al. (1996). The positive effect of independent and outside directors over employment is more puzzling. Shleifer and Vishny (1994) explain that political control of firms (as brought by a politically-dominated board) leads to a less efficient resource allocation than managerial control. Government-owned firms

Independent variables	(1) GMM-sys2	(2) GMM-sys2	(3) GMM-sys2
n_{it-1}	0.831***	0.851***	0.886***
	0.0825 0.000	0.0906 0.000	0.0536 0.000
w_{it}	-0.909***	-0.9389**	-0.695***
	0.1795 0.000	0.1237 0.000	0.1446 0.000
w_{it-1}	0.622***	0.690***	0.733***
	0.1099 0.000	0.0900 0.000	0.1318 0.000
k_{it}	0.206**	0.178	0.129*
	0.1034 0.047	0.1161 0.125	0.0705 0.068
k_{it-1}	-0.091	-0.072	-0.048
	0.0643 0.159	0.0709 0.309	0.0605 0.429
$polit_{it}$	0.025*		
	0.0130 0.051		
$indep_{it}$		0.022*	
		0.0115 0.058	
out_{it}			0.033**
			0.0145 0.025
$AzMun_{it}$	-0.0727	-0.021	-0.045
	0.0481 0.131	0.0508 0.685	0.0293 0.129
$AzSpec_{it}$	-0.0409	0.0044	-0.0155
	0.0372 0.272	0.0277 0.873	0.0329 0.637
AR(2)	-1.63	-1.55	-1.62
AR(2) p -value	0.104	0.120	0.105
Hansen $Pr > \chi^2$	0.996	0.970	0.620
Hansen df	110	88	85
Difference Hansen $Pr > \chi^2$	0.592	0.496	0.398
No. observations	699	699	699
Time dummies	yes		
Sample period	1994-2004		
No. firms	114		

Table 7. Employment, board composition and juridical form

are thought to forgo maximum profit in the search for social and political objectives such as wealth distribution and employment. The OECD (2005) claims that an effective governance, including a well balanced board of directors, should be aimed to prevent it. We therefore suspend the interpretation of the influence of independent and outside directors on employment and investigate their impact on firm profitability.

4. Board composition and firm value

We ask whether board dimension and composition affect firm value in the Italian public utilities. The question is relevant in general and particularly in the Italian institutional context. The progressive transformation of public utilities from the “Azienda Municipalizzata” into the “Società per azioni” juridical form has put the bases for their strategic independence and signalled the legislator’s intention to make firms autonomous in their expense plans and financing capacity. The prospective proficiency of state-controlled firms is essential for the actual entrance of private investors into their ownership structure as claimed by Coltorti et al. (2006) and Sapelli (2006) in reference to the Italian public utilities sector.

Corporate finance literature usually explains the relationship between governance and profitability by means of a dynamic linear model in which one or more lags of the dependent variable (stock return or accounting index) are used as regressor, like in the seminal work of Yermack (1996). Unless employment level, which is a stock variable accumulated over time, profitability is usually measured by flows, such as stock price or return on assets. We therefore study the effect of board dimension and composition on the operating performance of Italian public utilities by estimating the following static linear model:

$$y_{it} = \beta_1 G_{it} + \beta_2 X_{it} + \lambda_t + \eta_i + v_{it} \quad (8)$$

where y_{it} is a performance indicator, G_{it} is a governance variable, like juridical form, board dimension or composition, X_{it} are control variable, like sector or firm dimension, λ_t is a time dummy, η_i an individual, time invariant variable and v_{it} the error term. Only 10 out of 114 firms in our sample are listed, so that the firm value will be assessed by accounting measures, namely ROI and ROE. ROA has been excluded as a dependent variable for two reasons: first, ROA is quite stable during the sample period and across firms then little informative about differences among the sample units; second, most Italian firms finance their total assets more through accounting payables than with financial debt, so that ROA does not properly reflect the capital profitability, which is our main concern.

4.1. Board dimension

We estimate the model:

$$y_{it} = \beta_1 board_{it} + \beta_2 X_{it} + \lambda_t + \eta_i + v_{it} \quad (9)$$

with two-step GMM-sys estimators, where y_{it} is ROI or ROE, $board_{it}$ is the number of directors at time t and X_{it} represents a set of control variables that we alternatively use in order to check the robustness of our results. In particular, X_{it} includes firm dimension and the industrial sector. Employment and total assets, in levels or logarithm, are popular measures for firm size, and we try them all. We also separate the firms into three groups, small, medium and big, including companies whose total assets are below the 33th percentile, between the 33th and the 66th percentile and above the 66th percentile respectively. We consider the governance variable $board_{it}$ as endogenous consistently with the previous analyses on employment. Table 8 presents the results, with ROI as dependent variable.

We confirm for Italian public utilities the results that Yermack (1996) finds for US, listed, private firms with dispersed ownership: board dimension is negatively correlated

Independent variables	Dependent variables: ROI				
	<i>board_{it}</i>	-0.006**	-0.004*	-0.004*	-0.006**
	0.0027 <i>0.024</i>	0.0024 <i>0.074</i>	0.0025 <i>0.056</i>	0.0027 <i>0.023</i>	0.0026 <i>0.020</i>
<i>small_{it}</i>		0.035**			
		0.0161 <i>0.028</i>			
<i>medium_{it}</i>		-0.0022			
		0.007 <i>0.775</i>			
<i>size_{it}</i>			-0.010		
			0.0060 <i>0.112</i>		
<i>Assets_{it}</i>				0.000	
				0.000 <i>0.931</i>	
<i>n_{it}</i>					0.000
					0.000 <i>0.545</i>
<i>water_{it}</i>	-0.028	-0.0242	-0.0308*	-0.028	-0.029*
	0.0172 <i>0.102</i>	0.0158 <i>0.126</i>	0.0165 <i>0.062</i>	0.0174 <i>0.108</i>	0.0169 <i>0.085</i>
<i>gas_{it}</i>	0.054*	0.049*	0.04	0.054*	0.053*
	0.0294 <i>0.066</i>	0.0294 <i>0.095</i>	0.0272 <i>0.140</i>	0.0299 <i>0.069</i>	0.0289 <i>0.067</i>
<i>electr_{it}</i>	-0.006	-0.0132	-0.008	-0.006	-0.008
	0.0164 <i>0.674</i>	0.0157 <i>0.399</i>	0.0152 <i>0.583</i>	0.0165 <i>0.721</i>	0.0158 <i>0.620</i>
AR(2)	0.13	-0.09	0.12	0.13	0.15
AR(2) <i>p</i> -value	0.894	0.927	0.901	0.895	0.878
Hansen Pr > χ^2	0.301	0.507	0.448	0.298	0.310
Hansen df	64	64	64	64	64
Difference Hansen Pr > χ^2	0.517	0.339	0.387	0.584	0.526
No. observations	821	821	821	821	821
Time dummies	yes				
Sample period	1994-2004				
No. firms	114				

Table 8. Governance and economic performance: ROI

with profitability. Bigger boards pursuit higher headcount at the expense of economic value. The result is evident across industry and purged of any possible size effect. Firms in the gas industry show the tendency to a higher ROI, though the industry dummy is not significant when firm size is measured by the logarithm of total asset. In Table 9 the dependent variable is ROE.

Using ROE as dependent variable confirms the results obtained with ROI that the impact of bigger board on firm profitability is negative. The effect is reinforced by the belongingness to the water industry, while the positive impact the gas industry had on ROI is now neutralized.

4.2. Board composition

We follow the same approach as for employment and study the relationship between the number of politicians, independent and outside directors sitting on the board and firm profitability, by estimating the static model:

$$y_{it} = \beta_1 comp_{it} + \beta_2 X_{it} + \lambda_t + \eta_i + v_{it} \quad (10)$$

where $comp_{it}$ is, alternatively, $polit_{it}$, $indep_{it}$ or out_{it} , and the other variables are defined as in 9. We report the estimates for y_{it} equal to ROI but the results are confirmed with ROE.

On the contrary of what happens when the employment is the dependent variable, the number of politicians sitting on the board has a negative effect on profitability (see Table 10). Politically-connected directors seem to concentrate on increasing the headcount more than the firm economic performance. As before, the effect of independent directors is the same, in this case negative, as politicians', even if the estimated impact is less important and less significant than for politicians and not significant when firm size is measured by

Independent variables	Dependent variables: ROE				
	<i>board_{it}</i>	-0.006**	-0.007**	-0.006*	-0.008***
	0.0028 <i>0.012</i>	0.0030 <i>0.016</i>	0.0036 <i>0.090</i>	0.0030 <i>0.006</i>	0.0029 <i>0.012</i>
<i>small_{it}</i>		0.026			
		0.0169 <i>0.123</i>			
<i>medium_{it}</i>		-0.015			
		0.0106 <i>0.171</i>			
<i>size_{it}</i>			-0.006		
			0.0065 <i>0.399</i>		
<i>Assets_{it}</i>				0.000	
				0.000 <i>0.206</i>	
<i>n_{it}</i>					0.000
					0.000 <i>0.863</i>
<i>water_{it}</i>	-0.044***	-0.045***	-0.047***	-0.04***	-0.0416***
	0.0118 <i>0.000</i>	0.0136 <i>0.001</i>	0.0143 <i>0.001</i>	0.0120 <i>0.001</i>	0.0122 <i>0.001</i>
<i>gas_{it}</i>	0.038	0.029	0.024	0.042	0.038
	0.0353 <i>0.289</i>	0.0312 <i>0.352</i>	0.0374 <i>0.515</i>	0.0348 <i>0.219</i>	0.0357 <i>0.283</i>
<i>electr_{it}</i>	0.004	-0.001	-0.011	-0.001	0.005
	0.0210 <i>0.855</i>	0.0226 <i>0.955</i>	0.0273 <i>0.968</i>	0.0209 <i>0.962</i>	0.0229 <i>0.820</i>
AR(2)	-1.30	-1.15	-1.25	-1.31	-1.30
AR(2) <i>p</i> -value	0.195	0.250	0.210	0.190	0.194
Hansen Pr > χ^2	0.936	0.908	0.815	0.962	0.936
Hansen df	53	53	53	53	53
Difference Hansen Pr > χ^2	0.524	0.542	0.207	0.750	0.597
No. observations	821	821	821	821	821
Time dummies	yes				
Sample period	1994-2004				
No. firms	114				

Table 9. Governance and economic performance: ROE

Independent variables	Dependent variables: ROI				
	<i>polit_{it}</i>	-0.006*	-0.008*	-0.008**	-0.009**
	0.0037 <i>0.086</i>	0.0044 <i>0.066</i>	0.0040 <i>0.037</i>	0.0043 <i>0.034</i>	0.0041 <i>0.038</i>
<i>small_{it}</i>		0.027			
		0.0201 <i>0.181</i>			
<i>medium_{it}</i>		-0.003			
		0.0099 <i>0.771</i>			
<i>size_{it}</i>			-0.004		
			0.0060 <i>0.463</i>		
<i>Assets_{it}</i>				0.000	
				0.000 <i>0.906</i>	
<i>n_{it}</i>					0.000
					0.000 <i>0.555</i>
<i>water_{it}</i>	-0.031*	-0.032*	-0.034*	-0.031*	-0.033*
	0.0161 <i>0.055</i>	0.0171 <i>0.060</i>	0.0178 <i>0.057</i>	0.0181 <i>0.084</i>	0.0174 <i>0.057</i>
<i>gas_{it}</i>	0.029	0.027	0.028	0.033	0.032
	0.0336 <i>0.388</i>	0.0320 <i>0.396</i>	0.0331 <i>0.405</i>	0.0329 <i>0.311</i>	0.330 <i>0.338</i>
<i>electr_{it}</i>	0.0012	-0.018	-0.010	-0.008	-0.010
	0.0186 <i>0.945</i>	0.0164 <i>0.271</i>	0.0131 <i>0.454</i>	0.0130 <i>0.523</i>	0.0128 <i>0.418</i>
AR(2)	0.06	-0.02	0.11	0.10	0.13
AR(2) <i>p</i> -value	0.953	0.985	0.911	0.917	0.896
Hansen Pr > χ^2	0.454	0.393	0.455	0.432	0.437
Hansen df	53	43	43	43	43
Difference Hansen Pr > χ^2	0.265	0.118	0.220	0.284	0.147
No. observations	821	821	821	821	821
Time dummies	yes				
Sample period	1994-2004				
No. firms	114				

Table 10. Politically connected directors and economic performance

Independent variables	Dependent variables: ROI				
	<i>indep_{it}</i>	-0.006*	-0.004*	-0.002	-0.006*
	0.0034 <i>0.062</i>	0.0025 <i>0.096</i>	0.0027 <i>0.554</i>	0.0030 <i>0.066</i>	0.0026 <i>0.280</i>
<i>small_{it}</i>		0.028*			
		0.0167 <i>0.090</i>			
<i>medium_{it}</i>		-0.006			
		0.0070 <i>0.409</i>			
<i>size_{it}</i>			-0.007		
			0.0045 <i>0.135</i>		
<i>Assets_{it}</i>				0.000	
				0.000 <i>0.366</i>	
<i>n_{it}</i>					0.000
					0.000 <i>0.821</i>
<i>water_{it}</i>	-0.026*	-0.028**	-0.021	-0.026**	0.070*
	0.0132 <i>0.052</i>	0.0133 <i>0.038</i>	0.0167 <i>0.216</i>	0.0122 <i>0.034</i>	0.0145 <i>0.218</i>
<i>gas_{it}</i>	0.094**	0.073**	0.065	0.093	0.032*
	0.0391 <i>0.016</i>	0.0372 <i>0.049</i>	0.0442 <i>0.141</i>	0.0382 <i>0.014</i>	0.0392 <i>0.073</i>
<i>electr_{it}</i>	0.006	-0.043	0.060	0.0058	0.027
	0.0164 <i>0.677</i>	0.0155 <i>0.780</i>	0.0155 <i>0.699</i>	0.0150 <i>0.697</i>	0.0160 <i>0.866</i>
AR(2)	0.07	-0.08	0.03	0.05	0.06
AR(2) <i>p</i> -value	0.946	0.935	0.974	0.963	0.952
Hansen Pr > χ^2	0.963	0.969	0.974	0.971	0.963
Hansen df	53	53	63	53	63
Difference Hansen Pr > χ^2	0.695	0.861	0.946	0.755	0.776
No. observations	821	821	821	821	821
Time dummies	yes				
Sample period	1994-2004				
No. firms	114				

Table 11. Independent directors and economic performance

Independent variables	Dependent variables: ROI				
	<i>out_{it}</i>	-0.004*	-0.003	-0.003	-0.005*
	0.0027 <i>0.096</i>	0.0025 <i>0.244</i>	0.0038 <i>0.377</i>	0.0027 <i>0.086</i>	0.0026 <i>0.080</i>
<i>small_{it}</i>		0.027			
		0.0170 <i>0.109</i>			
<i>medium_{it}</i>		-0.000			
		0.0072 <i>0.976</i>			
<i>size_{it}</i>			-0.004		
			0.0063 <i>0.569</i>		
<i>Assets_{it}</i>				0.000	
				0.000 <i>0.859</i>	
<i>n_{it}</i>					0.000
					0.000 <i>0.37</i>
<i>water_{it}</i>	-0.024	-0.027*	-0.033**	-0.024	-0.025*
	0.0149 <i>0.110</i>	0.0146 <i>0.067</i>	0.0178 <i>0.041</i>	0.0159 <i>0.135</i>	0.0152 <i>0.099</i>
<i>gas_{it}</i>	0.053	0.045	0.044	0.052	0.051
	0.0331 <i>0.112</i>	0.0341 <i>0.188</i>	0.0268 <i>0.102</i>	0.0328 <i>0.114</i>	0.0328 <i>0.123</i>
<i>electr_{it}</i>	-0.0010	0.000	0.038	-0.002	-0.003
	0.0158 <i>0.949</i>	0.0147 <i>0.972</i>	0.0135 <i>0.779</i>	0.0157 <i>0.905</i>	0.0146 <i>0.830</i>
AR(2)	0.07	-0.08	0.03	0.07	0.08
AR(2) <i>p</i> -value	0.944	0.938	0.973	0.944	0.934
Hansen Pr > χ^2	0.309	0.540	0.787	0.303	0.297
Hansen df	64	64	53	64	64
Difference Hansen Pr > χ^2	0.242	0.140	0.884	0.2	0.158
No. observations	821	821	821	821	821
Time dummies	yes				
Sample period	1994-2004				
No. firms	114				

Table 12. Outsiders and economic performance

the logarithm of total assets, *size*, and total employment *td* (see Table 11). The same applies to outsiders (Table 12), but again the result is not robust when the firm size is measured by clusters of dimension or by the logarithm of total assets. In analogy of what happens with employment, there are some regularities in the behaviour of sector dummies, in particular for water, which reinforces the negative effect of politically-connected, independent and outside directors on profitability.

Finally, we test the effect of board composition, i.e. the percentage of political, independent and outside directors and the joint effect of their proportion and board size on firm performance. The two-step GMM-sys estimates of equation 10 are presented in Table 13 and Table 14, where $board_{it}$, $\%polit_{it}$, $\%indep_{it}$ and $\%out_{it}$ are the relevant regressors and firms are classified into the three groups “small”, “medium”, “big” depending on their total assets’ volume. Alternative size measures lead to analogous results.

The proportion of politically connected directors has a negative effect on firm performance. In addition, the coefficient is still negative and significant when we add board size as a regressor, thus confirming that board composition is more important than board size in influencing firm performance. The proportion of outside directors is never significant, while the incidence of independent directors is negative. The results are confirmed when we test the joint effect of different types of directors on performance with the exception of independent and outside directors. As far as independent directors are concerned, the interpretation of the result is not obvious but it seems to reinforce the idea that the objective of independent directors is not quite what we would expect from their profile: they likely mimic the politicians in favoring more employment at the expense of profitability. This might be due to the fact that directors independence, as declared by the firm chart, is perhaps disconnected from what emerges from their biography: some directors, whom we have recognised as politically connected to the blockholder without being public officers, thus strictly not politicians, are said to be independent, so that they may actually pursue the same objectives as politicians. In this case, the status of independent is not informative and the interpretation of the econometric result difficult.

Independent variables	Dependent variables: ROI					
$\%polit_{it}$	-0.103*			-0.103*	-0.186**	
	0.0537 0.056			0.0618 0.096	0.0885 0.036	
$\%indep_{it}$		-0.056*		-0.087***		-0.078**
		0.0329 0.089		0.0287 0.002		0.040 0.049
$\%out_{it}$			-0.503		-0.355	-0.050
			0.5656 0.374		0.230 0.123	0.129 0.697
$small_{it}$	0.028*	0.026	0.022	0.022	0.034*	0.026
	0.0166 0.081	0.0185 0.166	0.028 0.437	0.0171 0.206	0.0201 0.085	0.0214 0.219
$medium_{it}$	0.001	-0.014	-0.034	-0.004	-0.017	-0.017
	0.0088 0.854	0.0104 0.172	0.0356 0.346	0.009 0.663	0.022 0.424	0.014 0.218
$water_{it}$	-0.031**	-0.0121	-0.054	-0.019	-0.051**	-0.041*
	0.0125 0.011	0.0164 0.463	0.051 0.289	0.0187 0.298	0.025 0.040	0.021 0.051
gas_{it}	0.026	0.0647**	-0.054	0.057	-0.041	0.055
	0.0340 0.449	0.0264 0.014	0.1568 0.730	0.0358 0.112	0.0701 0.554	0.060 0.358
$electr_{it}$	-0.004	0.002	-0.0155	0.010	-0.009	-0.004
	0.0130 0.755	0.0205 0.915	0.0254 0.542	0.019 0.618	0.020 0.650	0.020 0.838
AR(2)	-0.09	-0.14	0.15	0.04	0.19	-0.06
AR(2) p -value	0.931	0.888	0.882	0.970	0.849	0.953
Hansen $Pr > \chi^2$	0.486	0.901	0.850	0.999	0.939	0.962
Hansen df	13	64	4	128	8	54
Difference Hansen $Pr > \chi^2$	0.358	0.433	0.811	0.136	0.939	0.950
No. observations	821	821	821	821	821	821
Time dummies	yes					
Sample period	1994-2004					
No. firms	114					

Table 13. Board composition and economic performance

Independent variables	Dependent variables: ROI		
	<i>%polit_{it}</i>	-0.096*	-0.146*
	0.0526 <i>0.068</i>	0.0784 <i>0.062</i>	
<i>%indep_{it}</i>	-0.084***		0.061*
	0.028 <i>0.003</i>		0.0370 <i>0.099</i>
<i>%out_{it}</i>		-0.119	-0.099
		0.0737 <i>0.106</i>	0.090 <i>0.273</i>
<i>board_{it}</i>	0.000	-0.001	-0.004
	0.0028 <i>0.883</i>	0.0025 <i>0.771</i>	0.0031 <i>0.156</i>
<i>small_{it}</i>	0.025	0.025	0.025
	0.0164 <i>0.131</i>	0.0173 <i>0.153</i>	0.0189 <i>0.192</i>
<i>medium_{it}</i>	-0.004	-0.001	-0.005
	0.008 <i>0.605</i>	0.0090 <i>0.906</i>	0.0126 <i>0.705</i>
<i>water_{it}</i>	-0.021	-0.036**	-0.030*
	0.0173 <i>0.214</i>	0.0153 <i>0.018</i>	0.0165 <i>0.065</i>
<i>gas_{it}</i>	0.055*	0.026	0.033
	0.0288 <i>0.056</i>	0.0283 <i>0.356</i>	0.0361 <i>0.362</i>
<i>electr_{it}</i>	0.012	0.004	-0.016
	0.0184 <i>0.511</i>	0.0169 <i>0.832</i>	0.0224 <i>0.482</i>
AR(2)	0.02	0.07	-0.08
AR(2) <i>p</i> -value	0.985	0.942	0.933
Hansen Pr > χ^2	1.000	0.926	0.952
Hansen df	192	102	111
Difference Hansen Pr > χ^2	0.996	0.841	0.928
No. observations	821	821	821
Time dummies	yes		
Sample period	1994-2004		
No. firms	114		

Table 14. Board composition and economic performance (continued)

5. Conclusions

This paper contributes to both the literature on board of directors and the literature on SOEs. We address three main issues: board composition in firms with concentrated ownership, the objective function of directors in SOEs and the role of independent directors. Despite their persistence and dissemination in most non-US countries, firms with concentrated, possibly state ownership are the focus of a recent literature with mixed results. For instance, Claessens et al. (2002) find that firm value increases with concentrated ownership of the largest shareholder but decreases as the wedge between control and ownership increases in family-controlled firms. They suggest that in family-controlled firms the blockholder have stronger incentive to extract private benefit than in widely held or financial firms. In such a situation board is expected to exert its mediation efforts toward controlling and minority shareholders. Yeh and Woidtke (2005) show that board affiliation to the controlling shareholder is associated to strong, negative entrenchment effects and find that relative firm value is negatively related to board affiliation in family-controlled firm. In SOEs board may be shaped as a “parliament” where representatives of different stakeholders (citizens, political parties, controlling government body, etc.) sit without exerting a real monitoring or advising function, then being bypassed by the controlling shareholder who can “directly” manage the firm. This was the typical situation in the European public utilities at least until the '90s, when the sector has been interested by a large privatization process as a part of a broader reform of the role of the state in

the economy (Stiglitz, 1993). One of the declared objectives of the privatization movement was changing the corporate governance environment of SOEs and improving their productive efficiency and performance. While empirical studies on efficiency have been extensive, the attention to the performance indicators was only lukewarm.

This paper addresses this open question by means of a newly hand-collected sample of 114 Italian public utilities during the period 1994-2004. The analysis on profitability and employment suggests that board composition matters even in State-owned firms with concentrated ownership and public blockholder. The inflationary effect that board size and the presence of politically connected directors have on the number of employees confirms the general opinion that State-owned firms are over-employed and employment-maximizing. Big boards might present coordination problems just like in privately held firms as theorized by Jensen (1993) and confirmed by Yermack (1996). A larger number of directors might also indicate the presence of several stakeholders, such as citizens or creditors, each represented into the board and with a potential interest in the increase of employment. The motivations underlying the limits imposed by the Italian Budget 2006 to the number of directors directly nominated by the public blockholder of state firms might be consistent with this view.

The negative effect on profitability does not exclude possible gains in efficiency, a question deserving further investigation. At the same time, the increase in employment does not prevent directors from pursuing strategies with a positive impact on welfare. Although the identification of a correct theoretical welfare measure and its empirical computation is a controversial issue (Becht, 1995), we might in future take advantage of the richness of the data set to infer welfare concerns through the analysis of firm strategies in terms of wages, prices, quality and service coverage.

The position of independent directors is ambiguous: they imitate politicians by negatively affecting firm value and positively influencing employment. In the existing theoretical literature outside directors are an undifferentiated group opposed to insiders. By distinguishing outsiders who are politically connected and outsiders declared as inde-

pendent we introduce a further differentiation and investigate the objectives pursued by directors within the board. The behaviour emerging from this paper suggests that beyond their status independent directors might hide an indirect affiliation to the politicians or even aim to the same objectives without necessarily enjoying any political connection. The absence of incentives gives them the chance to follow their own goals. Hermalin and Weisbach (1998) consider the possibility that boards in widely held companies are captured by the CEO and independent directors dismissed as advisors and monitors. Morck (2004) relies on a social psychology argument of “loyalty, trust, and duty” to motivate the existence of directors only nominally independent from the CEOs. In SOEs the directors nomination is more often regulated by the controlling government than by the manager but an analogous expression of deference might exist for independent directors toward the constituted power.

Bibliography

- [1] Agrawal, A., Knoeber, C. R., 2001. Do some outside directors play a political role? *Journal of Law and Economics* 44, 179-207.
- [2] Arellano, M., Bond, S., 1991. Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review Economic Studies* 58, 277-297.
- [3] Becht, M., 1995. The theory and estimation of individual and social welfare measures. *Journal of Economic Surveys* 9(1), 53-87.
- [4] Bond, S., 2002. Dynamic panel data models: a guide to micro data methods and practice. *Portuguese Economic Journal* 1, 141-161.
- [5] Boycko, M., Shleifer, A., Vishny, R. W., 1996. A Theory of Privatisation. *The Economic Journal* 106(435), 309-319.
- [6] Claessens, S., Djankov, S., Fan, J., Lang, H. P., 2002. Disentangling the incentive and entrenchment effects of large shareholdings. *Journal of Finance* 57(4), 2741-2742.
- [7] Coltorti, F., Giavazzi, F., Sapelli, G., Vitale, M., 2006. Indirizzi di governance per le società a controllo comunale in Una governance per le società a controllo comunale. Fondazione Civicum, Milano.
- [8] Comitato per la corporate governance delle società quotate, Borsa Italiana S.p.a., 2006. Rapporto e codice di autodisciplina.
- [9] Faccio, M., 2005. Politically connected firms. *The American Economic Review* 96(1), 369-386.
- [10] Fields, M. A., Keys, P. Y., 2003. The emergence of corporate governance from Wall St. to

- Main St.: outside directors, board diversity, earnings management, and managerial incentives to bear risk. *The Financial Review* 38, 1-24.
- [11] Hermalin, B. E., Weisbach, M. S., 1998. Endogenously chosen boards of directors and their monitoring of the CEO. *The American Economic Review* 88 (1), 96-118.
- [12] Jensen, M., 1993. The modern industrial revolution, exit and the failure of internal control systems. *Journal of Finance* 48(3), 831-880.
- [13] Morck, R., 2004. Behavioral Finance in Corporate Governance- Independent Directors and Non-Executive Chairs. Harvard Institute of Economic Research Discussion Paper Number 2037.
- [14] OECD, 2006. Guidelines on corporate governance of state owned enterprises. OECD Publishing.
- [15] Roodman D., 2006. An introduction to “Difference” and “System” GMM in Stata. Working paper 103, Center for Global Development, Washington.
- [16] Shapiro, C., Willig, R. D., 1990. Economic rationales for the scope of privatization. In E. N. Suleiman and J. Waterbury (eds.), *The Political Economy of Public Sector Reform and Privatization*, London: Westview Press, 55-87.
- [17] Shleifer, A., Vishny, R. W., 1994. Politicians and firms. *Quarterly Journal of Economics* CIX, 995-1025.
- [18] Windmeijer, F., 2005. A finite sample correction for the variance of linear efficient two-step GMM estimators. *Journal of Econometrics* 126, 25-51.
- [19] Sapelli, G., 2006. La trasformazione delle società di proprietà comunale: eterogenesi dei fini e rimedi di governance, in *Una governance per le società a controllo comunale*. Fondazione Civicum, Milano.
- [20] Stiglitz, J., 1993. On the economic role of the State. In J. Stiglitz et al., *The economic role of the state*, B. Blackwell.
- [21] The World Bank, 2006. Held by the visible hand. The challenge of SOE corporate governance for emerging markets. The World Bank, Corporate Governance, May 2006.
- [22] Yeh, Y., Woitke, T., 2005. Commitment or entrenchment?: Controlling shareholders and board composition. *Journal of Banking and Finance* 29(7), 1857-1885.
- [23] Yermack, D., 1996. Higher valuation of companies with a small board of directors. *Journal of Financial Economics* 40, 185-212.