Exercise of ownership rights and efficiency in state-owned enterprises: the case of Uruguay

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Abstract

Purpose – This paper aims to analyze the relevance of the exercise of ownership rights on the management of state-owned enterprises (SOEs).

Design/methodology/approach – The author exploited a “natural experiment” observed in Uruguay. The author developed an empirical method that to compare the results of SOEs between two five-year presidential terms with de facto differences with regard to the exercise of ownership rights.

Findings – The author found evidence suggesting that the poor exercise of ownership rights has a negative impact on the results of SOEs.

Research limitations/implications – The results of this study are based exclusively on the Uruguayan case and are limited to the comparison between two five-year terms.

Practical implications – A holding of SOEs that holds and exerts ownership rights emerges as a natural alternative to improve efficiency.

Originality/value – The exercise of ownership rights in SOEs has a significant impact on its performance indicators.

Keywords Corporate governance, State-owned enterprises, Financial results, Ownership rights

Paper type Research paper

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1. Introduction

This study analyzes the impact of corporate governance on the financial results of state-owned enterprises (SOEs). The author specifically focus on the significance of the exercise of ownership rights that emerges as one of the aspects of the problem of the separation between ownership and management. In the case of Uruguay, SOEs are managed by a board of directors, appointed by the Executive Branch that holds the role of principal and takes short and long-term decisions influenced by political interests.

Beyond the singularities of the Uruguayan case which are considered as a laboratory, evidence is presented which suggests that the lack of an appropriate definition on who exercises the ownership rights translates into significant efficiency losses. The estimates show that when the Executive Branch exercises the property right, the results of SOEs as a whole improve as opposed to when those decisions are taken by autonomous boards of directors.

The study of the impact of corporate governance on company results has a long tradition in literature. However, it has always been a controversial subject that entails questionable conclusions and scarce satisfying results (Poterba and Summers, 1995; Daily et al., 2003; Becht et al., 2005). Empirical evidence shows that the quality of corporate governance matters: enterprises that show the best indicators of corporate governance obtain better economic results (Gompers et al., 2003; La porta et al., 2003; Perry and Shivdasani, 2005; Larcker et al., 2007; Selvaggi and Upton, 2008). Literature suggests that through the use of few efficient procedures, and without the need for legal changes or judicial decisions, it is possible to achieve significant improvements in the corporate governance (Lipton and Lorsch, 1992). Also in cooperatives, where ownership rights fall under the scope of the workers themselves, good corporate governance is critical (Surroca et al., 2006).

Along the same lines, evidence show that corrections in the corporate governance of SOEs are key to improving management and therefore increase the potential to produce economic and social value (Aivazian et al., 2005; Andrés et al., 2011; Kato and Long, 2005; Kim and Chung, 2008; Mbo and Adjasi, 2013).
SOEs are relevant global players – they account for more than 20 per cent of world investments (Mbo and Adjasi, 2013). Although they prevail in strategic sectors of the economy such as energy, communications and transportation, they also have an active presence in multiple business sectors. In average, SOEs account for 13 per cent of the gross domestic product (GDP) and close to 5 per cent of employment in OECD countries (OECD, 2005). In China, 350 of the most important 500 companies are state-owned. In Latin America, SOEs generally rank at the top of international rankings in which companies are classified by size (Kowalski et al., 2013).

Uruguay is not an exception to the rule. Traditional SOEs are relevant actors. Just National Administration of Fuel, Alcohol and Portland Cement (ANCAP), National Administration of Electrical Usines and Transmitters (UTE) and National Administrator of Telecommunications (ANTEL) account for 8 per cent of investments (half of total public investment), 5 per cent of GDP and 2 per cent of employment in Uruguay.

In recent years, the aggregate financial results of ANCAP, UTE and ANTEL display a downward trend. If the EBITDA (defined as the global result net of interests, taxes, dividends and investments) is analyzed as a percentage of total income, it is seen that during the 2001-2004 period, the average was 35 per cent and during the 2005-2009 period it dropped to 32 per cent, whereas in the 2010-2014 period it dropped to 26 per cent. If EBITDA as a percentage of assets is considered, the picture is very similar[1].

Could there be a relationship between this decreasing trend in financial results and the corporate governance of SOEs? How relevant is the Government’s ability to exert ownership rights? In Section 2 of this document, the quality of corporate governance in Uruguayan SOEs is elaborated. Section 3 focuses on the exercise of ownership rights by SOEs. Section 4 introduces the empirical strategy and describes the database that was developed to conduct this study. Section 5 presents the results. Section 6 presents the conclusions.

2. Corporate governance in state-owned Uruguayan enterprises

In a recent work, Penfold et al. (2015) present a series of relevant indicators on the corporate governance of SOEs in Latin America based on public information collected from 105 companies in 13 countries, including Uruguay[2]. These indicators analyze whether the legal framework, exercise of ownership rights, the disclosure of information and the make-up of the board of directors are aligned with corporate governance “best practices”[3]. By “best practices”, the recommendations set forth in a series of documents created by the OECD (2006, 2011, 2013, 2014) and the CAF-Banco de Desarrollo (2010, 2012) are referred to, which are subject to a broad international consensus.

Latin America’s ranking on the average of the four indicators mentioned above is led by SOEs in Peru, Colombia and Brazil. They are followed by SOEs in Panama, Chile, Mexico, Costa Rica and Argentina. A third group includes SOEs in Ecuador, Venezuela and Bolivia. Uruguayan SOEs, represented in this case by ANCAP, UTE and ANTEL, exhibit the worst figures in terms of the quality of corporate governance (Table I).

Thanks to the information by Penfold et al. (2015), it is able to analyze in greater depth how the main Uruguayan SOEs are ranked in terms of the relevant indicators of corporate governance behind this average[4].
A first indicator analyzes the legal framework governing the SOEs. The purpose of this indicator is to assess whether the owner is independent from the regulator, whether the company operates within the scope of public or private law or if it is entitled to special benefits. In this sense, on an ascending scale from 0 to 10, ANCAP scores 3.8 points and UTE and ANTEL score 2.5 points; the average of companies within the region is 6.1 points.

A second indicator analyzes the disclosure of information. It focuses specifically on determining whether periodical audits are conducted by independent agencies, whether any financial statements have been published in accordance with international standards. It considers whether a strategic plan, a yearly performance report and a code of good corporate governance are also easily available. For this assessment, ANCAP scores 6 points out of 10, UTE scores 5 points and ANTEL scores 4 points; as a result, all of them belong at score levels that are close to 4.9 points, the average score for Latin America.

The third indicator taken into account analyzes the make-up of the board of directors. This indicator focuses on determining whether the appointment and discharge of directors is carried out with appropriate authority and independence, whether the directors exhibit a balanced combination of knowledge and experience and whether

<table>
<thead>
<tr>
<th>Country</th>
<th>No. of companies</th>
<th>Legal framework</th>
<th>Disclosure of information</th>
<th>Make-up of the board of directors</th>
<th>Exercise of ownership rights</th>
<th>Total score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peru</td>
<td>8</td>
<td>9</td>
<td>6.5</td>
<td>6.8</td>
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<td>7.8</td>
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<tr>
<td>Colombia</td>
<td>9</td>
<td>9.2</td>
<td>7</td>
<td>6</td>
<td>8</td>
<td>7.6</td>
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<td>6.2</td>
<td>6.5</td>
<td>7</td>
<td>7.2</td>
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<tr>
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<td>2.5</td>
<td>6</td>
<td>9</td>
<td>–</td>
<td>5.8</td>
</tr>
<tr>
<td>Chile</td>
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<td>7.2</td>
<td>5.7</td>
<td>5.2</td>
<td>4.2</td>
<td>5.6</td>
</tr>
<tr>
<td>Mexico</td>
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<td>6.2</td>
<td>5.3</td>
<td>4.8</td>
<td>–</td>
<td>5.4</td>
</tr>
<tr>
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<td>7.5</td>
<td>6.5</td>
<td>2</td>
<td>–</td>
<td>5.3</td>
</tr>
<tr>
<td>Argentina</td>
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<td>3.8</td>
<td>3.7</td>
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<td>4.5</td>
</tr>
<tr>
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<td>2.1</td>
<td>2.8</td>
<td>3</td>
<td>3.9</td>
</tr>
<tr>
<td>Venezuela</td>
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<td>2</td>
<td>1.7</td>
<td>1.7</td>
<td>10</td>
<td>3.9</td>
</tr>
<tr>
<td>Bolivia</td>
<td>8</td>
<td>4.8</td>
<td>2.5</td>
<td>2</td>
<td>5</td>
<td>3.6</td>
</tr>
<tr>
<td>Uruguay</td>
<td>13</td>
<td>2.9</td>
<td>5</td>
<td>3.2</td>
<td>0</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Notes: The data comes from Penfold et al. (2015). The indicator “Legal Framework” seeks to assess whether the owner is independent from the regulatory agent if the company is under the scope of public or private law and whether it enjoys special benefits. The indicator “Identifiable Owner” seeks to determine if the shareholder is clearly identified and whether he has the necessary expertise to exercise effective company ownership. The indicator “Disclosure of Information” seeks to determine whether periodical audits are conducted by independent entities, whether financial statements are published in accordance with international accounting standards and whether there is also public strategic plan, yearly management report and code of good corporate governance. The indicator “Make-up of the Board of Directors” seeks to determine to what extent the appointment and removal of directors is carried out with the corresponding authority and independence, as well as whether the knowledge and experience of the directors is properly balanced, and if there is public information available regarding the profile of the members of the board of directors. A score of 10 indicates the best possible score and 0 indicates the worst.
there is public information available on the profile of the members of the board. In this case, UTE with a score of 5 points out of 10 is the best ranked company, outranking Latin America’s 4.5 average score. ANCAP with a score of 3.8 and ANTEL with 0.8 points rank lower.

The last indicator analyzes the exercise of ownership rights and it seeks to determine whether the state shareholder is clearly identified and if it has the necessary expertise to exercise the ownership rights of the enterprise. In this matter, ANCAP, UTE and ANTEL rank at the lowest level among all the companies included in the sample. The score is 0 in all three cases and the average for Latin American countries is 5.7 out of 10. This aspect in which Uruguayan SOEs exhibit the worst scores will now be analyzed in depth.

3. The exercise of ownership rights
3.1 Ownership: An elusive concept
In a market economy, a company’s existence is marked by the presence of some essential roles. In the first place, there is an owner (shareholder) who has a specific interest in the company’s performance. Second, the board of directors is elected by the shareholder who seeks to ensure that the company attains the goals defined in the company’s articles of association and/or in subsequent decisions of the shareholder.

The board of directors acts on behalf of the shareholder, on a fiduciary basis, and is responsible for taking charge of the different functions of company governance and manager monitoring. The board is normally charged with the election of the chief executive officer (CEO) of the company, the definition of operating policies, the approval and monitoring of the strategy and the supervision and remuneration of the CEO. Lastly, the CEO is responsible for the company’s management. These three roles are accepted as core elements of corporate activity.

According to Berle and Means (1932), the development of large corporations with highly scattered shared capital, brought about the fact that none of the shareholders could find enough incentive to carry out the task of supervising the operation of the company. This originated a problem that was subsequently studied by Jensen and Meckling (1976) under the name of the Agency Theory. A few years later, Fama and Jensen (1983) were more explicit regarding the root of this problem – the agents who take important decisions do not receive any substantial part of the benefits derived from their decisions. This same problem is transferred to SOEs regardless of the fact that their ownership is represented by shares or that it is defined by a special article of association that assigns ownership rights to a public entity.

The transitive relationship is valid since the Agency Problem remains. An agency relationship is a contract under which one or more individuals (the stakeholder[s]) hires another individual (the agent) to deliver some type of service in benefit of the stakeholder, which implies that the agent will be granted the independence to decide on certain issues (Jensen and Meckling, 1976). Note that just like in the company, the problem arises out of the extreme scattering of share capital ownership; in the public sector the same effect is observed as a result of the lack of definition on who is the effective owner. If by owner (stakeholder) it is able to understand the chief of state, it is obvious that he/she is not a real owner but a second degree agent. Therefore, if the stakeholder is a person who profits or suffers the consequences of his/her decisions, it is needless to say that a chief of state does not fit into this definition.
According to the OECD, the state exercises the ownership rights of its enterprises in benefit of the general public (OECD, 2014). Therefore, the general public has chosen the chief of state that must be considered a stakeholder. So what we actually have in SOEs is a double agency relationship where the stakeholder (the general public) delegates to an agent (the chief of state) the decision-taking actions that are necessary for the SOE to achieve the objectives defined by the general public at some point in the past through the appropriate constitutional mechanisms. However, the agent (chief of state) delegates his authority to make decisions regarding the SOEs’ management to another agent (the board of directors).

In the end, if the two ends of the chain of authority are put together, it is seen that the problem defined in Berle and Means (1932) repeats itself: no citizen (shareholder) considered as a sole individual will find enough incentives to exercise the task of supervising the company’s operation. This problem is also mentioned by the OECD: corporate governance difficulties stem from the fact that the accountability for the performance of SOE involves a complex chain of agents (management, board, ownership entities, ministries, the government), without clearly identifiable chief executives (OECD, 2014). Ultimately, the exercise of property ownership becomes a critical issue for SOEs.

3.2 Enterprise, exercise of property ownership and efficiency

Alchian and Demsetz (1972) state that the fundamental purpose of the enterprise lies in the existence of a group of individuals who obtain a better result by working in collaboration as opposed to the sum of the results they would obtain if they worked individually. Because this is a collaborative work, it is often difficult to identify the work produced by each individual member of the group. Given these conditions, Alchian and Demsetz (1972) state that there is a production team that needs intelligent cooperation to perform efficiently. Individual incentives must therefore be based on some kind of measurement of the employees’ effort or diligence (Milgrom and Roberts, 1993).

Up to this point, corporate organization is not essential. The team members cooperate between them on behalf of their own interests and they do so in a sustained manner over time because they are aware that this is the path to achieve greater results than they would obtain otherwise. The concept of corporate organization will emerge when we reflect on the second necessary condition: the difficulty of measuring accurately each team member’s individual contribution. This shortfall increases the chances of opportunistic behavior among some members of the team. The simple thought that this may happen could dishearten those team members who know that they can make a significant contribution, discouraging their performance, which will lead to a drop in production and a loss for the group as well as for each individual member.

Given this reality, the team members themselves will look for a way to reduce the possibility that one or more members may display an opportunistic behavior. The need for corporate organization emerges at this point and it is materialized by appointing a member whose duty it is to monitor others to avoid the evasion of responsibilities. But who monitors the monitors? Alchian and Demsetz (1972) propose that at a certain point on the scale of supervisors a different mechanism must be adopted. This solution lies in the application of ownership rights, by assigning the supervisor, or the top supervisor the ownership rights of marginal revenues: whatever is left over when all members of the production team have been remunerated. These ownership rights not only do
grant residual benefits but also grant the right to observe the work of the team members which is actually the job of the supervisors or monitors. This is how we arrive at the fact that these property rights define the company's ownership, which is no other than the ownership of the right to monitor (hire, layoff, promote, change, renegotiate) and the right to benefit from whatever may be left over, if any at all. From this point of view, for a company to be able to fulfill its role in society in an efficient way, the presence of an individual who holds and exercises ownership rights appears as a necessary factor.

3.3 The exercise of ownership rights in state-owned Uruguayan enterprises

According to the Uruguayan legal system, all SOEs define their purposes, competencies and regime in the corresponding organic law by which they were created, notwithstanding the general provisions set forth in the Constitution or in specific laws. The Constitution states that the establishment of the general policies that SOEs must follow is the responsibility of the Executive Branch (the chief of state) which owns different instruments to control their proper implementation, although there are no existing formal mechanisms to compel their implementation.

Somehow the Executive Branch appears to be the entity that holds the ownership rights of SOEs. However, the existing legislation does not include a clear definition indicating that the Executive Branch is the entity that exercises ownership rights regardless of the appointment of the directors.

This being done, from a formal point of view, the ownership of Uruguayan SOEs is exercised by the board of directors. Unless the Executive Branch removes the board of directors, there is complete self-governance and the shareholder does not exist from a practical point of view. In this way, the board of directors assumes the shareholders' responsibilities. Because of the fact that in Uruguay the duration of the terms of office of directors is subject to the presidential terms of office, their decision-making horizon can never exceed a five-year period.

In private-owned companies the person accountable for short-term results is the CEO and the boards of directors remain over time and contribute to strategic decisions with their long-term vision. This is not the case for Uruguayan SOEs: the directors find themselves in a situation that is similar to that of the CEOs in the private sector, but, in practice, nobody assumes the role of long-term monitoring. Just as in the private sector this is the responsibility of the directors as fiduciary owners, in SOEs this should be the responsibility of an entity that takes on this responsibility. The OECD proposes that the exercise of ownership rights should be clearly identified in the government administration. It states that the exercise of ownership rights should be centralized in a single ownership entity or where this is not possible, it should be exercised by a coordinating agency. This agency should have the proper capacity and competencies to effectively carry out its duties (OECD, 2014).

Ultimately, the directors of SOEs can only be accountable for how they make use of the assets owned by that company, but they cannot be considered shareholders. The fact that they cannot be considered shareholders should not necessarily represent a weak point within the system because, as explained previously, the “shareholder” has his own role and so does the “board of directors”. Nevertheless, it has been explained that in Uruguay, in practice, the board of directors is similar to the shareholder regarding several of the essential functions that the shareholder must carry out. However, if because of the nature of the board of directors, this “assimilation” does not produce the
expected results, then the board is not qualified to fulfill the role of a shareholder. It must be concluded that in Uruguay, the SOE lacks the essential contribution brought on by a “shareholder” according to the best practices of corporate governance mentioned earlier. In view of the above, it seems right to expect that this weakness will have a negative impact on the management results of these companies. As a summary, an essential part of the company’s nature represented by the board of directors is actually receiving *de facto* an unbalanced degree of autonomy by being charged with these responsibilities. According to *Vancil and Buddrus (1978)* this has the potential to become a source of inefficiency.

4. Empirical strategy
Based on some observed facts, the case of Uruguay turns out to be a sort of “natural experiment” to measure the relevance of the exercise of ownership rights on the level of efficiency of SOEs. This is made possible thanks to the differences observed in the relationship between the Executive Branch and SOEs in comparing two five-year presidential terms governed by the same political party: The Vazquez Administration 2005-2009 versus the Mujica Administration 2010-2014.

According to the reports of the Planning and Budget Office of the Executive Branch, during the first year the Vazquez Administration (2005) developed new guidelines for the preparation of budgets for SOEs and updated key performance indicator records. In turn, these reports record the follow-up and analysis of the five-year investment budget for SOEs and its coordination with the corresponding public entities (related ministries, Court of Auditors and the National Internal Audit Office).

Another relevant fact for the purpose of our research is that during the Vazquez Administration monthly meetings were held between the Chairs of the board of directors of SOEs and Executive Branch authorities. The explicit objective was to achieve greater coordination to align SOEs with the country’s national project. In particular, this coordination entity for the Chairs of SOE sought to develop agreements to share physical infrastructure to transfer managerial experiences to implement planning and control procedures and to improve efficiency in government purchases. In practice, these meetings were actually used by the Executive Branch as an instrument to exercise the ownership rights of SOE. Although it cannot be stated that during these meetings all the functions inherent to whoever holds the role of shareholder were in fact exercised, it is fair to recognize that many of the actions undertaken during the course of these meetings were very similar to those that would normally be exercised by the shareholders of a company.

The reports of the Planning and Budget Office of the Executive Branch inform that during the entire course of the Mujica Administration (2010-2014), all the obligations established in the Constitution of the Republic and all the legal provisions and regulations related to SOEs were complied with. These reports record the creation of drafts for the preparation of management agreements, the development and dissemination of guidelines for the preparation of budgets and the participation in coordination meetings to analyze the financial impact of the budgetary proposals that were presented. They also state on record that the balance sheets of SOEs were duly analyzed, and the preparation and monthly follow-up of the financial plan were complied with. Nevertheless, the monthly meetings that had been implemented during the previous administration were discontinued. The Mujica Administration stopped
summoning the coordination meetings with the Chairs of the boards of directors of SOEs. In other words, the exercise of ownership rights was transferred from the scope of the Executive Branch to the board of directors of each of the SOEs. Therefore, just as in the previous paragraph it was stated that the actions carried out during those coordination meetings did not completely fulfill the role of a shareholder, it is needless to say that by discontinuing those meetings, the Mujica Administration eliminated the exercise of that portion of the actions inherent to a shareholder’s responsibility.

This de facto difference between the relationship of the Executive Branch with SOEs during the Vázquez and the Mujica administrations allows us to assess the significance of the exercise of ownership rights. To obtain results that can be compared between the two five-year presidential terms, an empirical strategy was developed that would allow to extract for each SOE the idiosyncratic components inherent to the Chair of the board of directors or the components that are external to the company that may affect performance regardless of any changes in the exercise of ownership rights.

In the first place, the EBITDA for each state-owned company based on the following equation was calculated:

\[
\text{EBITDA}_it = \beta_1 X_{it} + \beta_2 \Delta GDP_t + \beta_3 \Delta XR_t + \beta_4 \Delta OIL_t + \beta_5 R_{t-1} + \epsilon_{it} \tag{1}
\]

where \(\text{EBITDA}_{it}\) is the result of company \(i\) at moment \(t\), excluding interests, taxes, dividends and investments, measured in real terms (inflation adjusted); \(X_{it}\) indicates the characteristics of the Chair of the board of company \(i\) at moment \(t\), which includes management experience, track record in the company, previous training in this area and previous experience in the company’s operating industry; \(\Delta GDP_t\) is the quarterly variation of the Uruguayan GDP; \(\Delta XR_t\) is the quarterly variation of the exchange rate of the Uruguayan peso against the US dollar; \(\Delta OIL_t\) is the quarterly variation in the price of oil (only relevant for the case of ANCAP because it imports oil for refinement); \(R_t\) is the quarterly rainfall level for the country (only relevant for the case of UTE because abundant rainfall enhances hydroelectric power production) and \(\epsilon_{it}\) is the usual residual that includes every other factor affecting EBITDA.

Once the equation (1) for each SOE has been calculated, the value of EBITDA explained by a series of relevant factors or “fundamentals” will be defined. In this way, in equation (2), the \(\text{EBITDA}^*_{it}\) variable for each company \(i\) at moment \(t\) with the estimated values for parameters \((\beta^*_{1}, \beta^*_{2}, \beta^*_{3}, \beta^*_{4}, \beta^*_{5})\) was calculated in equation (1) and the values were observed in the explanatory variables:

\[
\text{EBITDA}^*_{it} = \beta^*_{1} X_{it} + \beta^*_{2} \Delta GDP_t + \beta^*_{3} \Delta XR_t + \beta^*_{4} \Delta OIL_t + \beta^*_{5} R_{t-1} \tag{2}
\]

Then the portion of the results observed in SOEs that cannot be explained by the “fundamentals” established in equation (1) was identified. This residual result emerges by extracting the value estimated in the equation (2) from the EBITDA observed for each company \(i\) at moment \(t\):

\[
\text{Residual Result}_{it} = \text{EBITDA}_{it} - \text{EBITDA}^*_{it} \tag{3}
\]
Ultimately, the procedure allows us to isolate the part of the result of the SOEs’ operations that cannot be explained by the Chair’s personal traits or by external factors that have a significant effect on its management.

Lastly, to be able to compare the results between companies of different size and type, the residual results as a proportion of assets and as a proportion of the total revenues of each company were considered. In this way, it is possible to apply a test of mean difference between the residual results observed during the 20 quarterly periods of the Vazquez Administration and the 20 quarterly periods of the Mujica Administration.

To implement the empirical strategy, data available in the profit and loss statements of ANCAP, UTE and ANTEL were used which is published regularly by the Ministry of Economics and Finance. The EBITDA in constant pesos for 2013 was calculated using the Consumer Price Index published by the National Bureau of Statistics.

At the same time, the database with information on the personal traits of the Chairs of the SOEs that may impact their managerial performance was supplemented. The latter required the search and processing of public information regarding the technical training, business management education, experience in business administration and track record in the same company of each one of the Chairs of the board of directors of ANCAP, UTE and ANTEL.

Lastly, the following were included in the database information on the evolution of the Uruguayan GDP published by the Central Bank of Uruguay; the evolution of the US dollar published by the National Bureau of Statistics, the evolution of the price of oil published by the International Monetary Fund and data on rainfall levels obtained from the Uruguayan Institute of Meteorology.

Using the information collected from all of the above mentioned sources, a database on a quarterly basis from the beginning of 2002 until the end of 2014 was developed. It should be noted that 2002 is the first year in which information on the results of SOEs is made available.

5. Results
Table II introduces the results of the estimates of EBITDA* for each one of the SOEs considered in this case study. For every case, the parameters of the equation (1) by the Ordinary Least Squares[6] were estimated.

In the first place, for each company, all the following variables were considered: the personal traits of the Chairs of the Board of Directors, as well as external factors that may eventually have an impact on EBITDA during the 52 quarterly periods, using information available as of the year 2002. Column (1) presents the results for ANCAP, Column (3) for UTE and Column (5) for ANTEL.

Next, the model solely based on the variables was estimated that turned out to be statistically significant. In the case of ANCAP, the variables that had a significant impact on EBITDA for the period under consideration were the experience in business administration of the Chair of the board and the GDP growth in Uruguay (Columns [1] and [2]).

In the case of UTE, the variables that had a significant impact on EBITDA also include the experience in business administration of the Chair of the board of directors and the rainfall levels (Columns [3] and [4]). Lastly, in the case of ANTEL the variables that had a significant impact on EBITDA were all the variables related to the Chair of the board of directors, i.e. technical training, education in business administration,
### Table II: Estimates of EBITDA*

<table>
<thead>
<tr>
<th>Explanatory variables</th>
<th>ANCAP (1)</th>
<th>UTE (2)</th>
<th>ANTEL (3)</th>
<th>ANTEL (4)</th>
<th>ANTEL (5)</th>
<th>ANTEL (6)</th>
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<td><strong>Traits of the chairs</strong></td>
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<td>Technical training</td>
<td>−820 (980)</td>
<td>72 (688)</td>
<td>2492*** (796)</td>
<td>2525*** (322)</td>
<td></td>
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<td>Education in Business Administration</td>
<td>n.a.</td>
<td>287 (557)</td>
<td>2937*** (903)</td>
<td>2460*** (635)</td>
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<td>Experience in Business Administration</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company track record</td>
<td>3283*** (823)</td>
<td>3621*** (1305)</td>
<td>2821*** (841)</td>
<td>3074*** (872)</td>
<td>750** (803)</td>
<td></td>
</tr>
<tr>
<td>GDP growth</td>
<td>2758 (2358)</td>
<td>1.148 (942)</td>
<td>1453* (851)</td>
<td>−2023** (1139)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP growth (−1)</td>
<td>28454 (26697)</td>
<td>164671*** (53126)</td>
<td>14611 (14669)</td>
<td>38487*** (21273)</td>
<td></td>
<td>63418*** (22960)</td>
</tr>
<tr>
<td>Dollar variation (−1)</td>
<td>1461 (2852)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rainfall (−1)</td>
<td></td>
<td>0.2808*** (0.101)</td>
<td>0.2731*** (0.098)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>52</td>
<td>52</td>
<td>52</td>
<td>52</td>
<td>52</td>
<td>52</td>
</tr>
</tbody>
</table>

**Notes:** ***p < 0.01; **p < 0.05; *p < 0.10; All estimates are made by the ordinary least squares. Standard errors are referenced in brackets. EBITDA is the global result excluding interests, taxes, dividends and investments. Technical training refers to whether the Chair has obtained university degrees related to the industry in which the company operates. Education in business management refers to whether the Chair has an undergraduate or postgraduate degree in business administration. Experience in business administration refers to whether the Chair has held an ownership position in an institution before taking up his position in the SOE. Company track record refers to whether the Chair has a track record in the company before taking up the position. Dollar variation indicates the quarter variation in the exchange rate via a vis the US dollar. (−1) indicates that the variable has been delayed for a quarter.
background in business administration and track record in the same company, as well as the growth of GDP in Uruguay (Columns [5] and [6]). Based on these estimated coefficients, the EBITDA* for each SOE was calculated, as shown in equation (2) of the previous section and the residual result as shown in equation (3) of the previous section.

Table III compares the quarterly results of Uruguayan SOEs observed during the Vazquez Administration and the Mujica Administration. The difference in the results from both periods can be clearly observed. Considering both EBITDA and the residual result (calculated based on the parameters estimated in Columns [2], [4] and [6] of Table II), there is enough statistical evidence to show that for both periods under consideration, the SOEs recorded different results. Furthermore, there is a significant drop in performance during the Mujica administration.

After extracting all those personal traits inherent to the Chair of the board of directors and the external factors that could affect management performance, a drop in efficiency levels during the 2010-2014 period was found. In other words, over the course of a five-year period during which the Chairs of the companies held monthly meetings with the Executive Branch, given that the latter exercised the ownership rights of SOEs, the achieved results were better than during a period in which these meetings were discontinued.

To complete the analysis, it must be stated that the failure to summon the meetings of the Chairs of SOEs was not the only institutional difference between the two five-year presidential terms. Another difference can be pointed out: during the Vazquez Administration the board of directors of SOEs was totally made up of the representatives of the ruling political party, whereas during the Mujica Administration it was made up of members of the political opposition parties. It is not possible to point out the effect of this institutional change on the methodology developed nor is it possible to isolate it from the potential effect on the exercise of ownership rights. However, it must be stated that the participation of the political opposition parties in the board of directors could affect our conclusions only if this had a negative impact on the management of SOEs, which seems hard to imagine. On the other hand, if the impact had been positive this fact would further underpin our conclusions.

An extra factor that may prove relevant and which has not been incorporated into the previous analysis is the fact that during the Mujica Administration, SOEs significantly improved the compensations to their managerial teams, as compared to other similar positions in the private sector. It must be taken into account that traditionally in

<table>
<thead>
<tr>
<th></th>
<th>2005-2009</th>
<th></th>
<th></th>
<th>2010-2014</th>
<th></th>
<th></th>
<th>Mean difference</th>
<th>p value</th>
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<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>n</td>
<td>Mean</td>
<td>SD</td>
<td>n</td>
<td></td>
<td></td>
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<tr>
<td><strong>EBITDA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>% Assets</td>
<td>7.6</td>
<td>5.4</td>
<td>120</td>
<td>5.9</td>
<td>2.6</td>
<td>120</td>
<td>0.016</td>
<td></td>
</tr>
<tr>
<td>% Revenue</td>
<td>39.4</td>
<td>22.1</td>
<td>120</td>
<td>38.6</td>
<td>19.3</td>
<td>120</td>
<td>0.415</td>
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<tr>
<td><strong>Residual result</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Assets</td>
<td>1.8</td>
<td>4.7</td>
<td>120</td>
<td>1.4</td>
<td>3.0</td>
<td>120</td>
<td>0.278</td>
<td></td>
</tr>
<tr>
<td>% Revenue</td>
<td>8.2</td>
<td>20.7</td>
<td>120</td>
<td>3.3</td>
<td>16.0</td>
<td>120</td>
<td>0.071</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:** EBITDA is the global result excluding interests, taxes, dividends and investments. "n" represents the sample size. The p value corresponds to the statistical proof of mean difference.
Uruguay, low and medium hierarchical positions in SOEs have a higher salary, but in higher positions the private sector salary conditions are much more favorable. However, if this factor were to have a significant impact, it would underpin the conclusions: having the possibility of retaining more qualified managers would, if anything, have a positive impact on the Mujica Administration and would therefore strengthen our results.

An additional limitation to this study lies in the fact that because of the available data, the fact that the SOE operates in a monopolistic market cannot be considered – as is the case of ANCAP and UTE – or in competitive markets – as is the case of ANTEL – at least partially – as relevant factors that have an impact on the results of the study[7]. Unfortunately, there is not enough volume of information available that would allow to analyze separately each one of the enterprises and validate the results from a statistical point of view. In any case, during the period under study, no legal or de facto changes occurred that may have altered the structure of the markets in which SOEs operate. Therefore, it cannot be expected that a factor which remained constant during the two periods that are being compared have a significant impact on aggregated results.

Finally, it must be acknowledged that it would be desirable to include “satellite” companies that operate under the scope of SOEs in the empirical analysis. SOEs must coordinate the actions of several companies owned by them. On the one hand, a large part of these “satellite” companies emerged as ad hoc solutions to evade procedure-control focused public law and to – ideally – be able to operate within the scope of private law which is based on performance control and accountability. On the other hand, this type of institutionalization within the public sector permits the use of crossed subsidies within SOEs, implemented via the internal distribution of cost or purchase transfer between companies and “satellites”. Again, the lack of available data operates as a limitation. Nonetheless, the creation of new “satellite” companies does not pertain exclusively to any of the periods that are being analyzed. Of the 24 “satellite” companies capitalized with resources from ANCAP, UTE and ANTEL, 16 existed before 2005, three were incorporated between 2005 and 2009 and five were incorporated between 2010 and 2014. Therefore, it cannot be expected that a factor which remained stable during the two periods under comparison may have a significant impact on aggregated results.

6. Conclusion
This document assesses the impact of the quality of corporate governance on the management of SOEs. Specifically, empirical evidence was presented suggesting that the exercise of ownership rights of SOEs is a variable that has a significant impact on management efficiency. The results presented in this study indicate better results were achieved whereas the ownership of the enterprises was exercised by the Executive Branch (2005-2009) instead of exercised by the Chair of the board of directors (2010-2014).

Our works opens up a natural path for future research to consider the case study of countries that have undergone profound institutional changes which have had an impact on the exercise of the ownership rights of SOEs. Specific cases within the region can be pointed out, such as the cases of Chile, Colombia and Peru, where the exercise of ownership property of SOEs is presently carried out through “holdings”. In this way, the
conclusions obtained based on the case of Uruguay – where changes in the exercise of ownership were de facto and not de jure – may be underpinned.

The obtained results enhance the significance of a possible alternative action. Legal regulations could be adapted in such a way that all the ownership rights of SOEs are formally transferred to a new entity within the state. The entity that assumes ownership rights must report to the citizen representative bodies, such as the parliament, and it must clearly define the relationship with relevant public entities, including state control entities (OECD, 2014).

Specifically, this entity should be conferred the rights to coordinate the group of SOEs, to ensure objective compliance for each of the companies, to appoint and remove the boards of directors of each of the companies, to discuss and approve strategic decisions that legally exceed the responsibilities of the boards of directors of each company and to monitor the boards of directors.

Notes

1. It is important to mention that subsidies to consumers in terms of public tariff rates are not generalized: the price of fuel, electricity and telephone services are historically among the highest in the region and the world. (World Bank, 2015; Global Petrol Price, 2015).

2. Corporate governance is understood as the ensemble of processes, mechanisms and rules of engagement set forth between the owners, the board of directors and the administration (executive officer) to manage the company, achieve the established objectives, create sustainable value over time for its shareholders and respond to the requirements of stakeholders (Enrione, 2014).

3. Penfold et al. (2015) also takes into account an indicator related to the treatment of minority shareholders, which we have excluded from our analysis because it is irrelevant for Uruguay.

4. In the Appendix we analyze the quality of corporate governance in companies that operate as “satellites” of SOEs, which operate within the scope of private law.

5. Milgrom and Roberts (1993) define opportunistic behavior as a conduct guided by self-interest without taking into account the restrictions imposed by moral or ethical considerations.

6. Time series used were stationary according to usual test. The Dickey-Fuller Test (MacKinnon, 1996) rejects the null hypothesis that the series used have a unit root. In order to avoid potential problems of autocorrelation and heteroskedasticity, we estimated standard errors in a robust way according to the procedures set forth in Newey and West (1987).

7. 70 percent of ANTEL’s sales come from segments where there is no competition (50 per cent of revenues stem from cellular telephony and 20 per cent from data transmission) and only 30 per cent in monopolistic markets (fixed telephony).

References


Global Petrol Prices (2015), “Historical data on gasoline and diesel prices”.


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