IMPACT OF CORPORATE GOVERNANCE ON THE PERFORMANCE OF LATIN AMERICAN UNIVERSITIES

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ABSTRACT

Objective: The objective of this study is to investigate, in the Latin American context, the impact of university governance variables on the performance of these organisations, as measured by the result obtained in the QS ranking for Latin America, differentiating between public and private institutions.

Theoretical Framework: The relationship between the attributes of governance and performance has been the subject of different research carried out in the business environment, but not in the university environment.

Method: The methodology adopted in this research is quantitative and experimental. Two statistical methods were applied for the analysis: ordinary least squares (OLS) and Tobit regression. The sample corresponded to all the universities included in the QS ranking for Latin America, year 2020. The data corresponds to secondary sources, such as the websites of the universities analysed and the regulations and legislation of the corresponding universities and countries.

Results and Discussion: The results revealed that attributes such as the independence of the University Council (UC), the way the Rector is appointed and the presence of an independent audit committee have an effect on the performance of these institutions, with differences between the effect caused in public and private institutions.

Research Implications: The results show that these variables should be taken into account in university management to achieve higher performance, incorporating them as good practices for higher education.

Originality/Value: This study contributes to the literature on the application of statistical methods in the field of university governance, applied to a specific region, which is Latin America.

Keywords: Governance, Universities, Performance, Ranking, Latin America.

O IMPACTO DA GOVERNANÇA CORPORATIVA NO DESEMPENHO DAS UNIVERSIDADES LATINO-AMERICANAS

RESUMO

Objetivo: O objetivo deste estudo é investigar, no contexto latino-americano, o impacto das variáveis de governança universitária no desempenho dessas organizações, medido pelo resultado obtido no ranking QS para a América Latina, diferenciando entre instituições públicas e privadas.

Referencial Teórico: A relação entre os atributos de governança e o desempenho tem sido objeto de diversas pesquisas realizadas no ambiente empresarial, mas não no ambiente universitário.

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Método: A metodologia adotada nesta pesquisa é quantitativa e experimental. Foram aplicados dois métodos estatísticos para a análise: mínimos quadrados ordinários (MQO) e regressão Tobit. A amostra correspondeu a todas as universidades incluídas no ranking da QS para a América Latina, ano 2020. Os dados correspondem a fontes secundárias, como os sites das universidades analisadas e os regulamentos e a legislação das universidades e dos países correspondentes.

Resultados e Discussão: Os resultados revelaram que atributos como a independência do Conselho Universitário (CU), a forma como o reitor é nomeado e a presença de um comitê de auditoria independente têm efeito sobre o desempenho dessas instituições, com diferenças entre o efeito causado em instituições públicas e privadas.

Implicações da Pesquisa: Os resultados mostram que essas variáveis devem ser levadas em conta na gestão universitária para alcançar um desempenho superior, incorporando-as como boas práticas para o ensino superior.

Originalidade/Valor: Este estudo contribui para a literatura sobre a aplicação de métodos estatísticos no campo da governança universitária, aplicados a uma região específica, que é a América Latina.

Palavras-chave: Governança, Universidades, Desempenho, Classificação, América Latina.
1 INTRODUCTION

Corporate governance has become, globally, a popular and contemporary topic, attracting the attention of studies on the performance potential of corporations (Zulpahmi et al., 2024). Over the years, different studies have been made that have determined the governance attributes that are relevant for business performance. Universities, like any organization, must be governed and have a governance structure. Therefore, it is feasible to ask whether the corporate governance attributes in this setting could affect the performance of these institutions.

Corporate governance is the system through which organizations are led and controlled (Cadbury, 1992). According to Sitepu et al. (2024) corporate governance is defined as a diverse set of policies and practices that become the basic rules of the company to ensure effective control. Within these entities, it is possible to highlight three participants: the Shareholders, the Board of Directors, and the Senior Executives. The shareholders provide capital to the company and appoint the Directors or the Senior Managers. Meanwhile, the Board of Directors is in charge of defining the company’s mission, its expected goals, and results, setting out the strategic alignment, and supervising and reporting the results obtained to the shareholders. Finally, the Senior Managers are in charge of the daily management of the company and of implementing the policies and strategies defined by the Board of Directors. Therefore, in such an organizational chart, the Boards play an important role, which is being the link between the Shareholders and the Senior Managers, if there were contradictory points of view on any issue, aligning the interests of both parties (Bernal et al., 2012).

Under this framework, Auditors play an important role, as they provide Shareholders with an objective external view of the financial statements released by the Company and, thus, of the results obtained during a given period (Cadbury, 1992).

Different studies have been made, focused on the study of corporate governance, that have mainly been based on the Theory of Agency, of Stewardship, of the Stakeholders, and of the Dependence of Resources, among others (Durisin & Puzone, 2009; Huang & Ho, 2011; Rodríguez-Fernández et al., 2020).

Among the research projects focused on this issue, those which analyse how governance attributes affect the results, measured by financial, accounting, or market indicators, stand out. Some of the governance attributes analysed have been the size of the Boards, their makeup or independence, the duality of roles, and aspects related to Auditing Committees (Al Farooque et al., 2020; Coles et al, 2004; Detthamrong et al., 2017; Yermack, 1996).
Although there have been multiple research projects on the aforementioned topic, there is still a lack of evidence in the university setting, and on Latin America, in particular. In the university context, corporate governance is crucial. As such, the way these institutions are set up and organized depends on cultural and legal aspects, and on the kind of institution (public or private) they are. Therefore, attributes like the size of the UC, its independence, the duality of roles, presence, and independence of the Auditing Committees, among others, could be determining factors in their results. In addition, and unlike what happens in the business world, different methods can be used to appoint the Chancellor: direct voting, college representatives, corporate, and external (Ordorika, 2015).

Bearing this in mind, this paper examined whether the attributes of corporative governance affect the performance of universities. A sample of 129 universities was used, both public and private, from 13 Latin American countries. Using the data collected from the websites of the different universities, and the legislation of the respective countries, a descriptive statistic is provided about the different variables analysed: the size of the UC, its independence, role duality, presence and independence of the Auditing Committee or Department, and the appointment method for the Chancellor. After this, a model is defined within which two types of regressions were applied, to get to know the effect that each variable has on the performance of universities.

2 THEORETICAL FRAMEWORK

**UC Size:** Two theories establish that there should be a positive relationship between the performance of an organization and the size of this body: the Theory of Agency and that of the Dependence of Resources. According to the former, focusing on the role of supervision of the Boards implies that this should improve the larger the Board is. The second considers that large and diversified Boards contribute more knowledge of the sector, positively affecting strategic decision making and results. Therefore, in both cases, it is assumed that the larger the Boards are, the better the company’s performance will be (Pucheta-Martínez & Gallego-Álvarez, 2020).

However, empirical evidence is not conclusive in the business sphere. On one hand, supporting the Theories of Agency and of Dependence of Resources, the studies of Jackling & Johl (2009); Kiel & Nicholson (2003); Nicholson & Kiel (2007); and Pucheta-Martínez & Gallego-Álvarez (2020) have found a positive relationship between the size of the Board and the performance. On the other, Dowell, Shackell & Stuart (2011), Jensen (1993); and Yermack...
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(1996) have found that this relationship is negative. One of the explanations they give is that large Boards can have communication and coordination issues. On the contrary, small Boards would have a greater capacity to make quick decisions, especially during times of crisis, which would have a positive impact on the results of the companies.

Thus, taking the assumptions of the Theory of Agency and Dependence of Resources, the following hypothesis is stated:

**Hypothesis 1.** The performance of Latin American universities is positively related to the number of members in the UC.

**Role duality:** The presence of role duality occurs when a manager of the company (the Chancellor, in the case of universities) presides over the Board or Council.

The Agency approach states that role duality generates a concentration of power in the hands of just one person. Thus, according to Jensen (1986), strategies may be developed that favour the personal interests of the CEO.

Among the studies that support the Agency approach are those of Christensen et al. (2010) and Singh et al. (2018), which conclude that the duality of the CEO is negatively associated with the company’s profitability. One explanation provided by these studies would be that duality would keep the Board from independently exercising its role of control over management. In addition, duality would facilitate the accumulation of power in just one person, generating low-quality financial information, manipulation of benefits, and the performing of opportunistic actions, as well as decreased efficiency.

On the contrary, Dowell et al. (2011); Finkelstein & D’aveni (1994); Pucheta-Martínez & Gallego-Álvarez (2020); Villanueva-Villar et al. (2016) find a positive relationship. They explain that CEOs provide external directors with relevant information about the operation and finances of the company, which can ease the issues of agency related to the duality of the CEO. Likewise, it is argued that, on the CEO having more power, decisions are made more quickly and more drastically in times of crisis.

Thus, based on this, and under the assumptions of the Agency Approach and Dependence of Resources, it is stated that:

**Hypothesis 2:** There is a negative relationship between role duality and performance in Latin American universities.

**Independence of the UC:** Typically, the Boards of Directors of companies include a mix of internal and external Directors. Just as in the business world, it is possible to find both types of councillors in universities. In this case, internal councillors could be students, university authorities, professors, and administrative staff. The external councillors could be...
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graduates, business people, owners, and representatives from the community, the Government, corporations, or the Church.

From the Agency Approach, the presence of a high number of external councillors implies greater supervision, and that the interests of all stakeholders are addressed, and not just those of majority shareholders. In addition, it allows that they contribute with different approaches and that more objective decisions are made. On the other hand, the Theory of Dependence of Resources predicts that a high participation of external Directors allows for a better outreach of the company with its surroundings, aiding Managers to achieve the different goals of the company (Fama & Jensen, 1983; Guerrero-Villegas et al., 2018; Pucheta-Martínez & Gallego-Álvarez, 2020; Villanueva-Villar et al., 2016). Thus, the Theory of Agency and that of Dependence of Resources support a majority presence of Directors from outside the organizations.

Contrary to this, the approach of the Theory of Stewardship considers that Managers aim at maximizing the performance of the institution, because this gives them better opportunities for achievement, affiliation, and to comply with their self-fulfilment. In addition, internal members understand the heart of their business better, which has a positive impact on performance (De Silva Lokuwaduge & Armstrong, 2015).

Once again, in the business world, the evidence is not conclusive. Some studies like those of Jackling & Johl (2009); O’Connell & Cramer (2010); Pucheta-Martínez & Gallego-Álvarez (2020) show that there is a positive relationship between performance and the presence of external Board Members. On the other hand, Klein (2002); Pucheta-Martínez (2015), and Yermack (1996) find a negative relationship, while Carter et al. (2010) and Coles et al. (2004) find no significant relationship.

In addition, Asimiran & Ismail (2019) consider that, in the university sphere, although many University Councils consider the participation of people from outside the university community, who are appointed because of their experience and knowledge, the Academic Staff are the ones who can best contribute towards the development of these institutions. Likewise, de Silva Lokuwaduge & Armstrong (2015) found that the presence of duality in universities has a positive connection with teaching performance and a negative one with the performance of research and financial performance.

Thus, based on that proposed by the Theory of Agency and that of Dependence of Resources, it is suggested that:

**Hypothesis 3:** The percentage of external members in the UC is positively associated with the performance of Latin American universities.
**Independent Auditing Department or Committee:** Wardhani et al. (2018) explain that control is a process that allows motivating and stimulating members of an organization to carry out organizational activities and to reach their goals. Similarly, Ganga Contreras et al., (2015) state that the goal of control systems is to pool the different interests that emerge, reducing the likelihood of opportunist behaviours or the entrenchment of the Directors. From here arises the importance of there being different instances that align the opposing interests of the main one (UC) and the agent (Chancellor), allowing improving organizational efficiency.

In this sense, organizations must have control systems, an aspect that is key from the perspective of agency. Having these controlling entities allows mitigating the asymmetry of information between the Manager and the Shareholders and/or Bondholders, or between Senior Management and those of a lower level, guaranteeing that the decisions of the Managers are not detrimental to the interests of the Owners (Rönkkö et al., 2018).

Different studies have analysed whether the characteristics of Auditing Committees affect the performance of companies. Once again, the results are not conclusive. One example of this is the study of Al-Okaily & Naueihed (2019), who empirically examined the relationship between the characteristics of the Auditing Committee and the performance of the company. The authors concluded that characteristics like the size, experience, and regularity of the Auditing Committee’s meetings are positively related to the performance of non-family companies, although, in the case of family businesses, this relationship is not significant. Likewise, Dang et al. (2020) did not find conclusive results regarding this variable.

Other studies have found that the presence of an independent Auditing Committee is significantly and negatively associated with the financial difficulties of companies (Miglani et al., 2015).

In the case of universities, De Silva Lokuwaduge & Armstrong (2015) state that there must be different Committees in the UC’s structure, one of which is Auditing. This Committee should be independent of the top single-person authority of the university (Chancellor). In addition, within the framework of public management, Auditing Committees have an important role given that, through the delivery of reports and consultancies independent from the Chancellor, these provide a guarantee for the activities carried out.

Analysis of the structures of Latin American universities shows that there may be three possible situations: that there are no Auditing Departments or Committees; that there is one, appointed by the Chancellor or that reports to them; or that there is one that is independent of the Chancellor.

Based on this, the hypotheses laid out are:
Hypothesis 4: The presence of an Auditing Department or Committee positively affects the performance of Latin American universities.

Hypothesis 5: The presence of an independent Auditing Department or Committee positively affects the performance of Latin American universities.

Chancellor selection method: According to Ordorika (2015), 4 Chancellor appointment methods can be distinguished: direct voting; college of representatives; corporate; and external. In the first method (direct vote), voting processes are held where one or more university levels take part (academic staff, students, non-academic staff, and graduates). The college of representatives’ method occurs when the appointment of the Chancellor is done through a college of representatives, permanent in nature, or through a college of representatives established only for this purpose. The composition of these University Councils is varied, but university officers, academic staff, students, and non-academic staff may take part, among others. The third type – corporate – is related to universities that use different types of Governing Boards to appoint their maximum single-person authority. In this case, there is also a broad variety in terms of the origin, composition, and operation of said Boards. Finally, the external system occurs when the naming of the Chancellor takes place in external settings, mainly of a government or large corporation nature.

Regarding the participation of academic staff in the decision-making of universities, and their impact on university performance, Brown Jr. (2001) finds that greater control of the academic staff in the decision-making is associated with lower institutional performance levels.

Considering the above, the sixth hypothesis is put forward:

Hypothesis 6: The participation of the university community in the Chancellor appointment method positively affects the performance of Latin American universities.

3 METHODOLOGY

3.1 SAMPLE

Initially, the sample considered the top 150 universities ranked in the 2019 QS Ranking for Latin America. However, 21 universities were excluded from the sample on there not being enough information available for the analysis. Thus, the sample comprised 129 universities. Data was taken from the web pages of these universities, as well as from Laws related to higher education from the different countries where these institutions operate.

3.2 VARIABLES
3.2.1 Dependent variable

Research projects made in the business sphere, to measure performance, have used financial indicators, like Tobin’s Q ratio (Jackling & Johl, 2009; Pucheta-Martínez & Gallego-Alvarez, 2020; Yermack, 1996), performance over shares (Finkelstein & D’aveni, 1994; Jackling & Johl, 2009; Yermack, 1996) or performance over capital (Donaldson & Davis, 1991). However, this type of performance measure does not apply to universities, making it necessary to use an academic measure, like the university rankings (De Silva Lokuwaduge & Armstrong, 2015). These rankings have been previously used to measure university competitiveness and to evaluate the quality of higher education systems, their strengths, and weaknesses (Liu et al., 2019). In fact, this has been done in studies like those of Aghion et al. (2010) and Michavila & Martinez, (2018).

However, the presence of Latin American universities in the rankings has been scarce ever since the global rankings began. As an example, it can be mentioned that since the Shanghai Ranking (or ARWU) started, no more than 10 Latin American universities have been ranked among the top 500. Meanwhile, in the Times Higher Education (THE) and QS rankings, between 2019 and 2021, at most 5 and 22 universities, respectively, have been ranked (Clarivate, 2021; Quacquarelli Symonds, 2021; Times Higher Education, 2021).

Therefore, it is necessary to use a ranking that had been especially developed for the region. In this group, the THE and QS rankings have developed a version for Latin America. The first provides a ranking as of 2016. In the first 2 years, it generated a ranking that detailed position and score for the top 25 universities. In the following 3 years, it did so for the top 50 universities, and as of 2020, it has done so for the top 100. This ranking uses information provided by the different institutions and applies the same performance indicators used to evaluate the university missions in its global version (teaching, research, knowledge transfer, and international perspective), but re-calibrated to reflect the characteristics of the region’s universities (Times Higher Education, 2021).

On the other hand, the QS ranking for Latin America annually ranks 150 universities, using 8 indicators grouped into 5 criteria: impact and productivity of research; academia commitment; employability; online impact; and internationalization. From the indicators used, some are the same as those used in the global version (academic reputation, employer reputation, and the professor-student ratio), but others were designed especially for the region (academic staff with PhDs; international research network; citations per article; articles per professor; and web impact). The data required comes from different sources, like Elsevier.
Scopus; the Web of Universities ranking, and surveys to professors and employers (Quacquarelli Symonds, 2021).

Considering this, in particular, the number of institutions where both rankings provide information for, the performance measurement used was the score (Score) obtained by the universities in the 2019 QS ranking for Latin America.

### 3.2.2 Independent variables

Six independent variables were used. The first is the size of the UC (SIZ), measured by the number of members who are part of this entity. Role duality is the second independent variable (DUAL), and this is a binary variable that takes the value of 1 when there is a role duality, and 0 otherwise.

The third variable refers to the composition or independence of the UC (INDEP), measured as the percentage of external members involved.

Then, regarding the Auditing Department or Committee, two binary variables were used: AC and IAC. The first has a value of 1 when there is an Auditing Committee and 0 when this does not exist. Similarly, the second corresponds to the presence or absence of an independent Auditing Committee.

Finally, to measure the effect of the Chancellor appointment method on university performance, three variables were used: appointment by direct vote (ADV); appointment by college of representatives (ACR); and corporate appointment (CORP_A). Each one of these is a binary variable, which assigns 1 when the Chancellor appointment method by university i is by direct vote, college of representatives, or corporate, respectively, and 0 otherwise. The comparison variable of this case is the external Chancellor appointment method.

### 3.2.3 Control variables

In addition, 4 control variables were considered. The first is a binary variable that allows distinguishing between the type of institution (TI), that is to say, whether these are public or private. If this is a public institution, a value of 1 was assigned, and if private, then the value is 0. The second variable corresponds to the size of the university (SIZ_UN), measured by the number of undergraduate students. Likewise, the age of the university was considered, according to the years passed since its founding (ANT); and CTRY, which corresponds to the nationality of the university.
3.2.4 Model

To investigate whether university performance is associated with different governance attributes, this study adopted the regression approach by ordinary least squares (OLS), comparing it against the Tobit regression approach.

The model used to test the hypotheses was the following:

\[
S\text{core}_i = \alpha + \beta_1 SIZ_i + \beta_2 DUAL_i + \beta_3 INDEP_i + \beta_4 AC_i + \beta_5 IAC_1 + \beta_6 ADV_i + \beta_7 ACR_i + \beta_8 CORP_A_i + \beta_9 TLI_i + \beta_{10} SIZ UN_i + \beta_{11} ANT_i + \sum_{t=0}^{12} \beta_t CTRY_{ti} + \mu_i
\]

where:

\[S\text{core} \text{: Latent variable} \]
\[\mu_i \text{\(\sim\)} N(0, \sigma^2)\]

Finally, considering that the dependent variable can have values between 0 and 100, a Tobit model was applied. The limits are the following:

\[
S\text{core}_i = \begin{cases} 
0, \text{if } S\text{core} < 0 \\
S\text{core}, \text{if } 0 < S\text{core} < 100 \\
100, \text{if } S\text{core} \geq 100
\end{cases}
\]

4 RESULTS AND DISCUSSION

4.1 DESCRIPTIVE ANALYSIS

The universities within the sample belong to 13 countries. As seen in Table 1, the countries with the greatest representation are Brazil (30.2%), Argentina (16.3%), and Mexico (14.0%). Meanwhile, the countries with the least representation in the sample are Paraguay, Panama, and Puerto Rico (0.8% each).

In addition, the sample allowed distinguishing two types of universities: the public ones (70.5%) and the private ones (29.5%). In the group of public universities, the countries with the highest share are Brazil (28.7%), Mexico (10.1%), and Argentina (9.3%). On the other hand,
regarding private universities, the countries with the highest number of institutions are Argentina and Colombia (each one with 7%), and Chile (6.2%).

**Table 1**

*Number of Universities by Country and Type of Institution*

<table>
<thead>
<tr>
<th>Country</th>
<th>Public universities</th>
<th>Private universities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percentage</td>
<td>Number</td>
</tr>
<tr>
<td>Argentina</td>
<td>12</td>
<td>9.3%</td>
<td>9</td>
</tr>
<tr>
<td>Brazil</td>
<td>37</td>
<td>28.7%</td>
<td>2</td>
</tr>
<tr>
<td>Chile</td>
<td>9</td>
<td>7.0%</td>
<td>8</td>
</tr>
<tr>
<td>Colombia</td>
<td>5</td>
<td>3.9%</td>
<td>9</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>2</td>
<td>1.6%</td>
<td>0</td>
</tr>
<tr>
<td>Ecuador</td>
<td>4</td>
<td>3.1%</td>
<td>2</td>
</tr>
<tr>
<td>Mexico</td>
<td>13</td>
<td>10.1%</td>
<td>5</td>
</tr>
<tr>
<td>Panama</td>
<td>1</td>
<td>0.8%</td>
<td>0</td>
</tr>
<tr>
<td>Paraguay</td>
<td>1</td>
<td>0.8%</td>
<td>0</td>
</tr>
<tr>
<td>Peru</td>
<td>2</td>
<td>1.6%</td>
<td>2</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>1</td>
<td>0.8%</td>
<td>0</td>
</tr>
<tr>
<td>Uruguay</td>
<td>1</td>
<td>0.8%</td>
<td>0</td>
</tr>
<tr>
<td>Venezuela</td>
<td>3</td>
<td>2.3%</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>91</td>
<td>70.5%</td>
<td>38</td>
</tr>
</tbody>
</table>

The size of the University Council of public universities ranges between 6 and 301 members, while this is between 6 and 80 members for the private ones. The most common group has 9 members and is present in 12 institutions (4 private and 8 public), and 19 universities have more than 76 councillors, from which just one is private.

As can be seen in Table 2, role duality is present in 68.2% of all the universities, in 74.7% of public universities, and in 52.6% of the private ones.

Regarding the independence of the UCs, 79.1% of these entities comprise internal and external members, a situation that is seen in 82.4% of public universities, and in 71.1% of private ones. However, 18.6% of the universities have a UC comprising only internal members (17.6% of the public ones, and 21.1% of the private ones), while 2.3% only have external members, all of these private in nature.

It is seen that 66.7% of the universities have an Auditing Department or Committee (76.7% of the public universities, and 42.1% of the private ones), but just 32.6% of the institutions have an independent Auditing Department (36.3% of the public universities, and 23.7% of the private ones).

Finally, the most commonly used Chancellor appointment method (32.6%) is the external one, followed by the college of representatives (27.2%), corporate (23.3%), and direct vote (17.1%). In public universities, the overriding system is external appointment (42.9%), followed by the college of representatives (29.7%), direct vote (20.9%), and corporate (6.6%).
Regarding private universities, the most used system is the corporate one (63.2%), followed by the college of representatives (21.1%), then direct vote, and external (7.9% each one).

### Table 2

**Characterization of the Sample by Governance Attributes**

<table>
<thead>
<tr>
<th>Role duality</th>
<th>Public Total</th>
<th>%</th>
<th>Private Total</th>
<th>%</th>
<th>Total Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without role duality</td>
<td>23</td>
<td>25.3%</td>
<td>18</td>
<td>47.4%</td>
<td>41</td>
<td>31.8%</td>
</tr>
<tr>
<td>With role duality</td>
<td>68</td>
<td>74.7%</td>
<td>20</td>
<td>52.6%</td>
<td>88</td>
<td>68.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independence from the UC</th>
<th>Public Total</th>
<th>%</th>
<th>Private Total</th>
<th>%</th>
<th>Total Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both groups</td>
<td>75</td>
<td>82.4%</td>
<td>27</td>
<td>71.1%</td>
<td>102</td>
<td>79.1%</td>
</tr>
<tr>
<td>External members</td>
<td>0</td>
<td>0.0%</td>
<td>3</td>
<td>7.9%</td>
<td>3</td>
<td>2.3%</td>
</tr>
<tr>
<td>Internal members</td>
<td>16</td>
<td>17.6%</td>
<td>8</td>
<td>21.1%</td>
<td>24</td>
<td>18.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Presence of an independent Auditing Department or Committee</th>
<th>Public Total</th>
<th>%</th>
<th>Private Total</th>
<th>%</th>
<th>Total Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent Auditing Com.</td>
<td>37</td>
<td>40.7%</td>
<td>7</td>
<td>18.4%</td>
<td>44</td>
<td>34.1%</td>
</tr>
<tr>
<td>Independent Auditing Com.</td>
<td>33</td>
<td>36.3%</td>
<td>9</td>
<td>23.7%</td>
<td>42</td>
<td>32.6%</td>
</tr>
<tr>
<td>Without Auditing Com.</td>
<td>21</td>
<td>23.1%</td>
<td>22</td>
<td>57.9%</td>
<td>43</td>
<td>33.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chancellor appointment method</th>
<th>Public Total</th>
<th>%</th>
<th>Private Total</th>
<th>%</th>
<th>Total Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>College of representatives</td>
<td>27</td>
<td>29.7%</td>
<td>8</td>
<td>21.1%</td>
<td>35</td>
<td>27.2%</td>
</tr>
<tr>
<td>Corporate</td>
<td>6</td>
<td>6.6%</td>
<td>24</td>
<td>63.2%</td>
<td>30</td>
<td>23.3%</td>
</tr>
<tr>
<td>External</td>
<td>39</td>
<td>42.9%</td>
<td>3</td>
<td>7.9%</td>
<td>42</td>
<td>32.6%</td>
</tr>
<tr>
<td>Direct vote</td>
<td>19</td>
<td>20.9%</td>
<td>3</td>
<td>7.9%</td>
<td>22</td>
<td>17.1%</td>
</tr>
</tbody>
</table>

### 4.2 REGRESSIONS ANALYSIS

Initially, following the assumptions of the Theory of Agency and Dependence of the Resources, six hypotheses were laid out. According to these, the variables: UC size; its independence; the presence of an Auditing Department or Committee (dependent and independent); should positively affect the result of the university. Likewise, role duality should negatively affect it. In addition, it was suggested that the appointment methods that were more participatory of the university community should also positively affect the result of the universities.

Then, a model was suggested, and the hypotheses were compared using two regressions (OLS and Tobit), first for the entire sample, then segregated by university type. The results obtained through both regressions are shown in Tables 3 and 4.

The F and chi² statistics provided by the OLS and Tobit regressions indicate that the significance is met, following the empirical specifications laid out, both for the entire sample, and for the public universities, but not for the private ones.

Regarding the entire sample, the OLS and Tobit regressions showed that variables related to the Chancellor appointment methods (ACR and CORP_A) provided statistically
significant results and would negatively affect the performance of the universities. This result is the opposite of what was expected and allows inferring that universities should prefer an external method (comparison variable).

Another statistically significant variable from the Tobi regression is IAC. However, this variable affects the performance of universities in an opposing way to what was expected. From this, it could be inferred that excessive management control would negatively affect the performance of the universities. This situation could be explained because universities work in a globalized world, where international interdependence and the accelerated rhythm of change demand more flexible, adaptable, and agile organizations (Waller et al., 2019). In addition, just as De Silva Lukunaduge & Armstrong (2015) explain, external monitoring negatively affects teaching performance, while independent Audit Committees do not have the professional experience in teaching and learning activities. Thus, hypothesis 5 is rejected.

The other variables did not provide significant results. Thus, for the total sample, hypotheses 5 and 6 are rejected, as no evidence to accept the other hypotheses was found.

In terms of the private universities sample, it is seen that the INDEP variable had a significant result with both regressions. As laid out in hypothesis 3 and the Agency Approach, it was found that the independence of the UC positively impacts performance. From this, it can be taken that a higher percentage of external members would allow for greater monitoring and outreach, with a positive repercussion on the performance of the universities. This result would support the studies made in companies, like those of Jackling & Johl (2009); O’Connell & Cramer (2010), and Pucheta-Martínez & Gallego-Álvarez (2020). Hence, hypothesis 3 is accepted.

Other significant variables in these institutions, but that go against what was expected, are the variables ADV, CORP_A (using the Tobit regression), and ACR (through both regressions). This indicates that the method that should be used to appoint their Chancellor should be external. These results fall in line with Brown Jr. (2001), namely, that institutional performance is negatively affected by a greater control of academic staff in decision making. This, because a high participation of academic staff means that it is necessary to reach agreements between different contending groups, and it is difficult to reach a consensus regarding the future of the university. Thus, hypothesis 6 is rejected.

Given that no statistical significance was found for the other variables, hypotheses 1, 2, 4, and 5 could neither be accepted nor rejected.

In the case of public universities, the results indicate that just the ACR variable is statistically significant (using Tobit regression). Therefore, in these universities, the
participation of the university community in the appointment of the Chancellor allows that the decisions made by the latter are legitimized and recognized, positively affecting their performance (López Zárate et al., 2011). Hence, these universities must favour the appointment method by direct vote over the rest.

Considering that the results provided by both regressions for the public universities, hypotheses 1, 2, 3, 4, and 5 could not be confirmed, but hypothesis 6 is accepted.

Regarding the control variables, the size variable of the institution has a positive and significant relationship for the set of universities studied, and for the public and private universities, individually. For the case of the set of universities, for every 10,000 additional students, the score increases by around 4 points. The results are significant for the set of universities and the public universities. This result is consistent with what was stated by Pérez-Esparrells & García (2009), and Quiles & Gracia (2015), in the sense that larger universities rank higher.

The age of the institutions is the second control variable. Both regressions indicate that this variable would positively contribute to the performance of the set of universities, and the public ones, while it would be negative for private universities. In any case, the results do not have statistical significance.

Finally, the type of university negatively and significantly affects the performance of the universities. Given that this variable is binary, and that a value of 1 was assigned to public universities, the results provided by both regressions indicate that private universities obtain a higher performance than public ones.

Table 3

Results of OLS regressions

<table>
<thead>
<tr>
<th>Expected Result</th>
<th>Private Universities</th>
<th>Public Universities</th>
<th>All universities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>69.47145***</td>
<td>37.81222***</td>
<td>60.39197***</td>
</tr>
<tr>
<td>SIZ +</td>
<td>(17.87627)</td>
<td>(11.32925)</td>
<td>(9.97827)</td>
</tr>
<tr>
<td>DUAL -</td>
<td>0.156365</td>
<td>-0.042539</td>
<td>-0.043696</td>
</tr>
<tr>
<td>(0.5359)</td>
<td>(0.05096)</td>
<td>(0.05385)</td>
<td></td>
</tr>
<tr>
<td>DUAL +</td>
<td>0.762029</td>
<td>-0.92195</td>
<td>-2.894604</td>
</tr>
<tr>
<td>(10.34513)</td>
<td>(0.20519)</td>
<td>(4.15954)</td>
<td></td>
</tr>
<tr>
<td>INDEP +</td>
<td>0.2023061*</td>
<td>-8.832671</td>
<td>0.084679</td>
</tr>
<tr>
<td>(0.10763)</td>
<td>(6.45404)</td>
<td>(0.08704)</td>
<td></td>
</tr>
<tr>
<td>AC +</td>
<td>10.24468</td>
<td>1.167051</td>
<td>-1.896668</td>
</tr>
<tr>
<td>(11.09772)</td>
<td>(5.79478)</td>
<td>(4.19920)</td>
<td></td>
</tr>
<tr>
<td>IAC +</td>
<td>-11.22491</td>
<td>-3.214599</td>
<td>-7.764966</td>
</tr>
<tr>
<td>(16.36103)</td>
<td>(8.00407)</td>
<td>(5.07260)</td>
<td></td>
</tr>
<tr>
<td>ADV +</td>
<td>-23.86417</td>
<td>11.64708</td>
<td>-9.893121</td>
</tr>
<tr>
<td>(19.46612)</td>
<td>(7.99746)</td>
<td>(8.03094)</td>
<td></td>
</tr>
<tr>
<td>ACR +</td>
<td>-35.77189*</td>
<td>-2.41577</td>
<td>-19.18451***</td>
</tr>
<tr>
<td>(18.52682)</td>
<td>(7.74493)</td>
<td>(7.47754)</td>
<td></td>
</tr>
</tbody>
</table>
Impact of Corporate Governance on the Performance of Latin American Universities

Table 4
Results of Tobit regressions

<table>
<thead>
<tr>
<th>Expected Result</th>
<th>Private Universities</th>
<th>Public Universities</th>
<th>All universities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>71.46525***</td>
<td>37.81222***</td>
<td>61.39239***</td>
</tr>
<tr>
<td>(16.09848)</td>
<td>(9.84769)</td>
<td>(9.52962)</td>
<td></td>
</tr>
<tr>
<td>SIZ</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0.159706</td>
<td>-0.041306</td>
<td>-0.043342</td>
<td></td>
</tr>
<tr>
<td>(0.25631)</td>
<td>(0.04306)</td>
<td>(0.04743)</td>
<td></td>
</tr>
<tr>
<td>DUAL</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0.5349717</td>
<td>-8.529331</td>
<td>-2.73851</td>
<td></td>
</tr>
<tr>
<td>(7.99608)</td>
<td>(5.38780)</td>
<td>(3.63993)</td>
<td></td>
</tr>
<tr>
<td>INDEP</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0.1933323**</td>
<td>-0.0895223</td>
<td>0.0772376</td>
<td></td>
</tr>
<tr>
<td>(0.09540)</td>
<td>(0.171060)</td>
<td>(0.08579)</td>
<td></td>
</tr>
<tr>
<td>AC</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9.601519</td>
<td>1.132778</td>
<td>-1.982052</td>
<td></td>
</tr>
<tr>
<td>(8.82313)</td>
<td>(4.88592)</td>
<td>(3.71329)</td>
<td></td>
</tr>
<tr>
<td>IAC</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>-11.31995</td>
<td>-3.121402</td>
<td>-7.611707*</td>
<td></td>
</tr>
<tr>
<td>(10.93584)</td>
<td>(6.76896)</td>
<td>(4.46635)</td>
<td></td>
</tr>
<tr>
<td>ADV</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>-24.34364*</td>
<td>11.09762*</td>
<td>-10.44194</td>
<td></td>
</tr>
<tr>
<td>(12.55507)</td>
<td>(6.41061)</td>
<td>(7.43958)</td>
<td></td>
</tr>
<tr>
<td>ACR</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>-33.96705***</td>
<td>-2.345903</td>
<td>-18.91207***</td>
<td></td>
</tr>
<tr>
<td>(9.30007)</td>
<td>(6.53912)</td>
<td>(6.41520)</td>
<td></td>
</tr>
<tr>
<td>CORP_A</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>-26.14803***</td>
<td>-3.586206</td>
<td>-18.62474***</td>
<td></td>
</tr>
<tr>
<td>(9.19183)</td>
<td>(6.64628)</td>
<td>(6.43332)</td>
<td></td>
</tr>
<tr>
<td>SIZ_UN</td>
<td>0.00011</td>
<td>0.00044**</td>
<td>0.00036***</td>
</tr>
<tr>
<td>(0.00013)</td>
<td>(0.00007)</td>
<td>(0.00006)</td>
<td></td>
</tr>
<tr>
<td>ANT</td>
<td>-0.0011425</td>
<td>0.0165153</td>
<td></td>
</tr>
<tr>
<td>(0.03248)</td>
<td>(0.01325)</td>
<td>(0.01435)</td>
<td></td>
</tr>
<tr>
<td>TI</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>-9.225081*</td>
<td>-9.225081*</td>
<td>129</td>
<td></td>
</tr>
</tbody>
</table>

N° observations 38 91 129
Prob >F or Prob>chi² 0.6072 0.0012 0.0011
R² or Pseudo R² 0.4262 0.4605 0.3488
R² adjusted 0.0658 0.0717 0.0502
Root MSE 18.303 15.226 15.996

*, ** and *** indicate levels of significance of 10%, 5% and 1%, respectively

Lastly, it is worth mentioning that a binary variable was applied for the different countries that were part of the study. Their results were not included in the table.
5 CONCLUSIONS

In the business area, it has been determined that performance is affected by the variables typical of their corporate governance. Universities, like any organization, need to be governed and have governance structures. Therefore, it is valid to ask whether variables associated with governance affect university performance. Using a sample of 129 Latin American universities, it was analysed whether the UC size, role duality, independence of the UC, the presence and independence of an Auditing Department or Committee, and the Chancellor appointment method would have repercussions on their performance, measured through the score obtained by universities in the QS ranking for Latin America.

This study showed that the variables related to the Chancellor appointment method were determining factors, in the performance of universities, but the way in which they do depend on the type of institution. Therefore, while private universities must favour the external appointment method, public universities must promote methods with greater participation, specifically appointment by direct vote.

Another relevant variable in the case of private universities is the independence of the UC. These institutions must favour a higher participation of external members.

Although there was no statistically significant result for private and public universities individually, for the set of universities, the variable related to the presence of independent Auditing Departments or Committees would negatively affect university performance.

Another important finding is that variables which are important in the business world, like the size of the Board, and role duality, are not important in the university world.

Ultimately, in light of the results found in private universities, it was determined that it is important for there to be a higher percentage of external members. But it would be interesting to look further into the composition of the UC. This, given that external members can be graduates, business people, owners, and representatives of the community, the Government, corporations, or the Church. In the case of public universities, it would also be interesting to delve deeper into those who are called to take part in the voting to appoint the Chancellor. Both aspects could lead to future research.

REFERENCES

Impact of Corporate Governance on the Performance of Latin American Universities


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Liu, Z., Moshi, G. J., & Awuor, C. M. (2019). Sustainability and indicators of newly formed world-class universities (NFWCUs) between 2010 and 2018: Empirical analysis from the rankings of ARWU, QSWUR and THEWUR. *Sustainability (Switzerland)*, 11(10). https://doi.org/10.3390/su11102745


