Corporate Governance and its Effect on Productivity under Different Business Environments: Evidence from Latin America

Abstract

We study the relationship between corporate governance and productivity in non-financial publicly traded firms based in Latin America. Using a sample of 670 firm-year observations during the period 2006-2014, we show that board size, gender diversity, institutional ownership, and the presence of independent directors, affect productivity. We find a statistically significant non-linear relationship between board size and productivity. Institutional ownership has a positive effect on productivity. Board independence has a negative effect on productivity. However, when controlling for the country's business friendliness and institutional ownership, the relationship between the level of board independence and productivity turns positive and statistically significant.

Introduction:

Corporate governance has been central in emerging market countries policy maker's agenda given that recent research shows that this issue is critical to generate development and growth in the private sector with spillover effects to the economy. Several changes in laws and regulations oriented to improve general corporate practices and in particular to protect investors have been introduced in some Latin American countries in recent years. However, according to some corporate governance rankings the investment environment in few countries in the region has deteriorated.

Finance and law literature show that strong legal protection to investors brings better functioning financial markets. La Porta, López-de-Silanes and Shleifer (1999) show that the average firm in the world has high ownership concentration levels and in most cases, the largest shareholder is highly involved in management duties. La Porta, et al. (1998) point out that ownership is more concentrated in countries with inferior shareholder protection (French civil-law countries). The legal system also affects corporate values (La Porta et al., 2002; Himmelberg, Hubbard, and Love, 2002).

Chong and Lopez-de-Silanes (2007) show that in Latin America, where countries offer less investor protection than the average protection in French civil-law countries, investors' expropriation risk is more severe, the cost of capital is higher, firms pay less in dividends, and, in general, the level of financial development is relatively low. According to Johnston (2004), only two shareholders typically hold more than 50 percent of a firm's equity in the region.

Previous studies demonstrate that the corporation's governance affects financial performance (Morck et al., 1988; McConnell and Servaes, 1990; Yermack, 1996; Eisenberg et al., 1998). Although there is evidence on how corporate governance affects value, performance, capital structure, and dividends with focus in the region (e.g. Bebczuk, 2007; Leal and Carvalhal-da-Silva, 2005), to our knowledge, there is not published research in Latin America that studies directly the relationship between corporate governance and firm's productivity and the effect of country-level governance characteristics, such as how business-friendly the country is for the corporation. This is one of the main contributions of our research.

Chiang and Lin (2007) recognize that in the finance literature, Tobin's Q is the most common proxy of firm's

productivity. Leal and Carvalhal-da-Silva (2005), and Garay and Gonzalez (2008) use Tobin's Q as a proxy of value or financial performance. According to Hill and Snell (1989) total factor productivity is a better measure of efficiency compared to Tobin's Q, mainly because accounting conventions subject to managerial discretion or straight manipulation of the numbers affect Tobin's Q. For the particular case of Latin America, we argue that Tobin's Q calculation might be more misleading given that it relies on market values and in addition, the difference between the market value and the intrinsic value of the company on average is greater in emerging economies relative to developed ones. We contribute to the literature by studying the relationship between total factor productivity and five proxies of corporate governance, four of them related to the board of directors' design. Our research is more comprehensive than existing research since it includes companies trading in the main Latin American markets. This is another contribution of our work.[1]

Ferreira et al. (2013) argue that government intervention and industrial policy among other exogenous factors to the corporation affect productivity levels in Latin America. However, even if Latin American countries share the same legal code, their government policies differ significantly in the level as well as the frequency of intervention in the economies. There is ample evidence of the effect of the country's business environment on market efficiency, firm's financial performance, and how firms organize their economic activity, including corporate governance. For example, Aggrawal et al. (2005) find that country-level policies such as stronger accounting standards, shareholder rights, and legal frameworks affect the country level of investments in the global mutual fund industry. A higher level of capital inflows in Latin American countries will decrease the cost of capital for firms in the region, increasing their productivity levels. Sinha (2006) shows that different regulatory environments that apply to financial versus non-financial firms pertaining corporate acquisitions affect company-specific variables like management turnover in a sample of British firms. Sinha (2006) also shows that outside directors are less effective to discipline management in banks relative to non-financial firms, given that the regulation that applies to banks creates a less competitive market for corporate control. In a related study, using a sample of Latin American companies, Pablo (2009) presents evidence where better economic and business-friendly conditions in the countries where the target firm operates increase the likelihood of a cross-border merger. The threat of acquisition might also affect the level of efficiency and productivity of Latin American firms.

Şeker and Yang (2014) show that bribery significantly distorts firm growth in the Latin American and the Caribbean region. Gonzalez et al. (2017) show that if the largest shareholder in a Latin American firm bases its operations in a common-law country, the company's dividend is higher, given the adoption of better governance standards through changes in the ownership structure. Finally, Garay and Gonzalez (2008) examine the relationship between corporate governance and firm

---

[1] Garay and Gonzalez (2008) study companies based in Venezuela while Carvalhal-da-Silva (2005) study companies in Brazil and Chile.

value analyzing a sample of firms based in Venezuela where investor protection levels are weaker than the average Latin American's levels. They find that better governance policies at the firm level are associated with higher dividend payout, market-to-book, and Tobin's Q ratios.

We have described some evidence related to the effect of corporate governance on firm's performance, value, and how indirectly, governance might affect productivity in Latin America. However, there is a lack of research about how corporate governance affects productivity in countries whose business policies are not friendly to corporations or their legal systems make enforcing contracts difficult and ultimately costly. We study the relationship between productivity and corporate governance under different country-level governance properties in Latin America, taking into account the disparity among countries in their friendliness of the business environment to companies basing their operations in the region. This is a third major contribution of our analysis.

Specifically, after controlling for the country business environment, we analyze how (1) board size, (2) the degree of board independence, (3) CEO duality, (4) gender diversity in the board, and (5) institutional ownership affect productivity levels in a sample of publicly traded companies in Latin America. First, we find that there is a non-linear relationship between board size and productivity. An increasing number of board members affects positively the productivity of Latin American firms but at a decreasing rate, suggesting an optimal size. This is consistent with previous empirical results about the relationship between board size and financial performance. Second, the effect that the percentage of independent directors in the board have on productivity is non-trivial in Latin American firms. At first, we find a negative and significant relationship between the percentage of independent directors and productivity, suggesting that board independence runs against productivity. However, the effect of board independence on productivity turns positive and significant at high levels of ownership by institutional investors, which suggest that a higher proportion of independent members only affects productivity positively when intuitional shareholders have ownership control. In general, the level of institutional ownership and productivity are positively related. Finally, we study how company-specific board-related governance proxies relate to productivity under different country-level business policies. Each year, we classify the countries into two categories, either business-friendly or business-unfriendly, using the Distance to Frontier (DTF) indexes created by the World Bank to construct the Easiness of Doing Business ranking, which updates annually. We find a stronger empirical relationship between company-specific corporate governance and productivity in countries whose policies are unfriendly to businesses or enforcing a contract is difficult and costly.

We organize the remainder of the paper as follows. Section 2 presents the literature review and hypothesis development. Section 3 describes the procedure followed to gather and select the data and explains the variables associated to test the productivity-governance relationship under analysis. Section 4 explains the main results, while Section 5 provides our conclusions.

Literature Review and Hypotheses Development:

There is ample evidence in the finance literature that corporate governance affects the financial performance of firms. Recently, the relationship between corporate governance and financial performance has been analyzed in developed countries different from United States, and in emerging market countries, where collecting data associated to governance at the corporate level is more difficult. Reddy et al. (2008) analyze the effect of corporate governance practices on the financial performance of a sample of small cap New Zealand companies. They find that a higher level of board independence and the existence of audit companies in small publicly traded firms improve financial performance proxied by Tobin's Q. Similarly, Shan and McIver (2011), analyzing a set of nonfinancial firms in China, find that board independence has a positive relationship with financial performance of large publicly traded Chinese firms, measured by the firm's Tobin's Q. This relationship however does not exist for smaller firms. Allan and Shazali (2005) find that a dominant Chief Executive Officer influences the ROE of Malaysian firms. Finally, Shahwan (2015) analyzes a sample of Egyptian firms and finds that not only the quality of corporate governance in Egypt is low but also the relationship between governance and financial performance is nonexistent. Shahwan (2015) measures financial performance using Tobin's Q and constructs a Corporate Governance Index (CGI) based on (1) the level of disclosure and transparency, (2) the composition of the board of directors, (3) shareholders' rights and investor relations, and (4) the ownership and control structure of the firms.

To address some shortcomings associated to the calculation of Tobin's Q and other financial performance proxies, previous studies have analyzed the relationship between corporate governance and the firm's productivity measured by the firm's Total Factor Productivity (TFP). Pre-tax income is the numerator of some financial ratios, which is extremely sensitive to the selection of the depreciation method. Among the potential shortcomings cited in the literature, this is one that is most cited. In addition, differences in accounting methods, including depreciation, also affect the value of the denominator of the typical financial performance proxies (Hill and Snell, 1989; Hay and Morris, 1979).[2]

Tian and Twite (2011) show for a sample of Australian firms that more efficient boards and greater usage of CEO stock-based compensation improve firm's productivity. They find however, that internal governance is less effective when the companies face a very competitive product market. Therefore, internal governance and external markets are substitute alternatives to enhance firm's overall productivity. Min and Smyth (2014) also show a positive effect of corporate governance of firm's productivity analyzing a sample of Korean firms. They find that foreign equity ownership has positive and significant effect on productivity, even greater than the firm's level of openness to the foreign markets. Min and Smyth (2014) contribute

---

[2] In general, however, we should expect a positive relationship between Tobin's Q and TFP. Palia and Lichtenberg (1999) find a positive correlation between these two variables.

to the results found by Tian and Twite (2011) in that not only is relevant to increase productivity to have a competitive product market but also a competitive equity market. Chiang and Lin (2007), analyzing a sample of manufacturing firms based in Taiwan, find that different proxies associated to the quality of corporate governance affects total factor productivity. Their most significant implication for further research is the fact that the type of firm under analysis affects the corporate governance influence on productivity. They find that the ownership structure, one of the many proxies of corporate governance they use, have a different effect on firm's productivity if the firm is (1) diversified or focalized, (2) high-tech or non-high-tech, and (3) family-owned or non-family-owned.

In Latin America, publicly trading companies on average have high levels of ownership concentration, are family-owned, and low-tech. There are just few contributions to the literature about corporate governance and its effect on firm value or performance in Latin America. Leal and Carvalhal-da-Silva (2005) show evidence consistent with a positive and significant relationship between corporate governance and firm value. They construct a Corporate Governance Index (CGI) based on 24 questions that anyone would answer objectively from publicly available information. Garay and Gonzalez (2008) focus their analysis in one of the Latin American countries with very low levels of investor's protection: Venezuela. They construct a Corporate Governance Index based on Leal and Carvalhal-da-Silva (2005)'s 24-question survey. The results are consistent with higher levels of corporate governance increasing dividend payouts, price-to-books, and Tobin's Qs for Venezuelan firms.

To the best of our knowledge, there is not empirical research that analyzes directly the relationship between governance and productivity of firms based in Latin America. Given that productivity increases should affect financial performance positively, the limited empirical evidence of the effect of corporate governance on financial performance in the region indicates an expected positive relationship. We will use four specific proxies of corporate governance directly associated to the board of directors' design: (1) board size, (2) the degree of board independence, (3) CEO-Chair duality, and (4) gender diversity. We will also analyze the effect that country-level governance variables have on the productivity of the firm and their interaction with the four company-specific governance variables we just mentioned.

There is no consensus about the direction of the relationship between board size and financial performance (Dalton et al., 1999). An increase in the number of board members potentially brings more diversity of knowledge and managerial oversight. However, a large number of members in the board of directors increases coordination problems making the decision process time consuming. In addition, in a large board, some members can free ride on the effort of other members. Although there is no direct evidence between board size and productivity, we expect to find a non-linear relationship, which is consistent with an optimal size, similar to the expected one between governance and financial performance.

H1: We expect a non-linear relationship between board size and firm's productivity in Latin America, with a decreasing benefit of adding additional members, which implies an optimal level.

Most of the literature shows evidence consistent with a positive relationship between board independence and financial

performance. Aebi and Schmid (2012) find board independence is a characteristic that explains better financial performance of financial institutions during a financial crisis. Setia-Atmaja (2009) shows that board independence enhances firm value and that performance impact of board independence is stronger in closely held firms and/or firms having low dividend payouts. Given that firms in Latin America are also closely held and pay lower level of dividends (Chong and Lopez-de-Silanes, 2007), and assuming high productivity firms have better financial performance, we expect a positive relationship between board independence and productivity.

H2: The higher the proportion of board independence, the more productive is the firm in Latin America.

Most of the evidence is consistent with CEO-Chair duality, affecting financial performance negatively. In the Jensen and Meckling (1976) agency CEO's behavioral model, CEO-Chair duality implies value destruction. If the CEO sets the agenda, she possesses more power over other board members. In this case, effective monitoring by directors might be compromised and firm performance could be affected. In Latin America, ownership concentration is high. When ownership concentration is high, the main agency problem arises between the large or controlling shareholders and minority shareholders. The dual role of CEO / Chairman of the Board might allow the CEO to expropriate minority investors through the acquisition of internal benefits such as an above market-based compensation. Therefore, we expect a negative relationship between CEO duality and financial performance, and consequently, CEO duality affecting negatively the firm's productivity.

H3: CEO duality implies a lower level of firm's productivity in Latin America.

Institutional ownership has influence on dividend policy, return volatility, financial performance, among other different corporate events of interest (Rubin and Smith, 2009; Chen et al., 2013; Dalton et al., 2013). Most of the evidence associates the presence of institutional ownership with better financial performance. Mnasri and Ellouze (2015) show that large ownership blockholders improve productivity in a sample of Tunisian firms. However, they find that this improvement is particularly associated to family ownership. We borrow evidence from the relationship between institutional ownership and financial performance to posit a positive relation between the level of institutional ownership and firm's productivity.

H4: Higher levels of institutional ownership increase firm's productivity in Latin America.

Latin America is a region characterized by high government intervention and overall high business risk. We argue that not only corporate governance at the firm's level but also good governance in the country where each of the companies operates affects the financial performance of the firm. Ferreira et al. (2013) argue that government intervention and industrial policy among other exogenous factors to the corporation affect productivity levels in Latin America. We posit that a better country governance associated to a higher level of investor's protection, better contract enforcement, and in general, a more amicable business environment positively affects the firm's productivity.

H5: A more amicable business environment increases the productivity of the firm.

Finally, empirical evidence shows mixed results when analyzing the effect of gender diversity on financial

performance (Adams et al., 2015). Differences between men and women might improve the board's decision-making process by allowing a more diverse perspective among board members. Better decisions should translate into better financial performance. However, there is also evidence that female directors have different risk preferences than those of male directors. Although the evidence is mixed, most of the empirical work shows that women are more risk averse than men. This could translate into lower financial performance if profitability proxies for financial performance. We expect even lower levels of gender diversity in the board of directors of Latin American firms relative to firms based in developed markets. We leave it to the empirical evidence to determine whether the relation between gender diversity in the board of directors and the productivity of the firm is positive or negative.

Methodology

We gather company-specific accounting information about publicly traded non-financial firms based in Brazil, Chile, Colombia, Mexico, and Peru from Bloomberg during the period 2006-2014[3]. We also collect our four corporate governance variables associated to the board of directors from Bloomberg. The final sample consists of 670 company-year observations associated with 131 Latin American companies.

We use a panel data model, where the main unit of observation is the total factor productivity (TFP) in a firm-country-year:

$$LnTFP_{it} = \beta_0 + \beta_1 X_{it} + \beta_3 Z_C + \beta_2 D_{it} + \beta_3 D_s + \beta_3 D_C + \varepsilon_{it} \qquad (1)$$

In equation (1), X_{it} represents firm level corporate governance variables, Z_c is associated to country-level governance variables that proxy for the easiness of doing business, D_{it} is the matrix of control variables at the firm level, D_s is a matrix of year dummies, and D_c is a matrix of dummies to control country effects. Finally, ε_{it} is the idiosyncratic error. $LnTFP_{it}$ is the natural logarithm of the Total Factor Productivity (TFP). TPF is the output per unit of total input, where input is a function of capital and labor. We follow the line of Nickell (1996), Nickell et al. (1997), and Koke and Renneboog (2005) and use a Cobb-Douglas production function with two factor inputs:

$$Y_{it} = A_{it} K_{it}^{\beta_k} L_{it}^{\beta_L} \qquad (2)$$

Equation (2) is subject to: $\beta_K + \beta_L = 1$ and Y_{it} is the firm-year output. Following Mnasri and Ellouze (2015), the output proxy is EBITDA. $K_{it}^{\beta_k}$ is the firm-year capital input measured by the firm's invested capital and $L_{it}^{\beta_L}$ is the firm-year labor input measured by the operating costs[4]. A_{it} is the measure of TFP to the firm i in the year t. We follow Tian and Twite

---

[3] Bloomberg also provides accounting information for Argentina and Venezuela. During the period under analysis, the government of Argentina started establishing restrictions on foreign capital flows in 2005, and later, it established a fixed exchange currency regime. Venezuela implemented a currency fixed exchange regime in 2003. Bloomberg and other providers of data use the country's official exchange rate to calculate accounting values in USD. We do not include Argentina and Venezuela since USD accounting values, especially total assets and sales would generate a distortion in our analysis.

[4] Neither Bloomberg nor Economatica offer detailed labor costs. Similar to Kim (2006), we proxy labor costs by the difference between EBITDA and sales. That difference represents the costs of goods sold plus administrative expenses. Consistent with

(2011) and Bulan et al. (2007), TPF is the result of elevating Euler's number to the difference between real and estimated output determined by the equation (3):

$$LnTFP_{it} = LnA_{it} = LnY_{it} - (\beta_K LnK_{it} + \hat{\beta}_L LnL_{it}) \qquad (3)$$

In figure 1, we calculate the average TPF by country-year normalized by the standard deviation to study the average productivity for each of the countries during the period analyzed. Mexico is the country where companies on average have the steadiest increase in productivity and the country with companies with the highest level of productivity in 2014. Chile is the country whose average firm's TPF is more volatile. In 2014, after Mexico, the most productive companies are in Chile, followed by Colombia and Brazil.

[Insert Figure 1 here]

We construct two sets of variables to test the hypotheses formulated. The first set of variables is associated to corporate board design and institutional ownership. The number of members in the board measures board size. The percentage of independent directors in the board proxy for the degree of board independence. The variable associated to CEO-Chair duality is a dummy variable that takes the value of one when the CEO is the Chairman of the Board and zero otherwise. The percentage of female directors in the board proxies for gender diversity. We use the percentage of institutional ownership to quantify the presence and importance of institutional ownership in each of the firm's ownership structure.

The second category of variables serves to quantify how amicable is the business environment in each of the countries and for each of the years under analysis. We use two country-level governance indicators from the Doing Business ranking of economies constructed by the World Bank and updated annually[5]. First, we use the Distance to Frontier (DTF) global index associated to Easiness of Doing Business. In general, the larger the DTF, the friendlier is the business environment in the country and therefore, we assume the country governance level is better. The global index aggregates the DTF scores on ten topics: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency. Second, we also use the DTF associated to the topic "enforcing contracts" to relate our hypotheses to the importance of the legal code in each of the countries under analysis under the constraint we face that all the Latin American countries function under the civil law system.

Finally, we use ROA, natural logarithm of sales, and the debt-to-equity ratio to control for profitability, firm size, and financial leverage, respectively.

Table 1 shows descriptive statistics associated to each of the company-specific variables under analysis. The first variable in the table provides descriptive statistics for the TFP. The next six variables are corporate governance related. Latin

---

Köke and Renneboog (2005), we also use as a proxy the total number of employees. Although we do not report the results here, they are consistent with those obtained using operating costs and administrative expenses.
[5] See http://www.doingbusiness.org/rankings.

American companies' board of directors during the period under analysis have a median value of nine members and 40 percent of them are independent (median value of four members). CEO-Chairperson duality is not common in Latin American firms: the CEO is the Chairperson of the Board in only 12 percent of the firms. On average, the percentage of female directors in the board is 6.28 percent. This value is lower than the average percentage of female directors in all the six western developed countries and in 7 out of 10 countries in the region Asia / Pacific / Mideast studied by Qian (2016). Finally, average institutional ownership is 41.9 percent highlighting the increasing importance of institutional investors – pension funds among them - in our sample of public Latin American firms.

[Insert Table 1 here]

Analysis of Results

Table 2 shows OLS results where TFP is the dependent variable and the independent variables belong to two categories: (1) corporate-board-related variables and (2) specific control variables. Each cell shows the coefficient and the standard error in parenthesis. In columns 1 and 2, we assume a linear relationship between board size and productivity while in columns 3 and 4, we are directly testing hypothesis 1 which posit a quadratic relationship between board size and productivity. In support of our hypothesis 1, empirical results are consistent with a quadratic relationship between board size and the productivity of the firm. A greater number of board members increases productivity but at a decreasing rate, suggesting an optimal level. The coefficient to the number of members is positive and significant at least at a 5 percent level. Its squared value is negative and statistically significant at least at a 10 percent level.

The evidence in table 2 contradicts hypothesis 2 regarding the potential benefit that a higher level of board independence would have on the firm's productivity. Results in table 2 show that the coefficient to our proxy for board independence is negative, which suggest a negative effect of board independence on productivity. The results are statistically significant at a 1 percent level of confidence. Given the positive empirical relationship between the level board independence and financial performance (i.e. Aebi and Schmid 2012; Setia-Atmaja, 2009), we were expecting a positive relationship between the level of board independence and productivity.

Table 2 also shows that the relationship between CEO-Chairperson duality and productivity is not statistically significant while there is negative relationship between board gender diversity and productivity. The most likely explanation for the null effect of CEO duality on productivity may be that on average there is no separation between management and ownership in Latin America. Hypotheses 3 is based on a quantifiable effect of CEO-Chairperson duality on productivity based on the owner potentially expropriating minority investors. However, it seems that this potential agency problem does not affect productivity in a meaningful amount.

Finally, a greater proportion of women in the board also affects negatively the productivity on Latin America. The result is statistically significant at a 5 percent level. As we mention before, the evidence between the ratio of female directors

in the board and corporate financial performance is mixed. Some studies find a positive association (i.e. Carter et al., 2003; Erhardt et al., 2003). However, other studies show a negative or non-existent association (i.e. Shrader et al., 1997; Rose, 2007). We posit that gender might be serving as a proxy for a missing variable. Women in the board might have less experience, less education or they might be more risk averse than their male counterparts. We are not controlling for these factors. Finally, Table 1 shows that there is a positive and significant relationship between productivity and (1) profitability, (2) leverage, (3) size. These results are statistically significant at a 1 percent level. Overall, results for profitability and leverage are consistent to those obtained by Tian and Twite (2011). They find however no statistical significant relationship between productivity and size.

[Insert table 2 here]

Given the cross-sectional time-series properties of our data, table 3 presents Panel Data models using GLS. We further explore the counterintuitive result shown in table 2 about the negative relationship between the level of board independence and productivity that contradicts our second hypothesis. The first four regressions validates OLS results presented in table 2. This time, we evaluate individually the effect of the level of independence in the corporate board, its gender diversity, and the effect CEO-Chair duality. The signs of the coefficients and their statistical significance are similar to those presented before. In the regression in column 5, we analyze the effect of the level of institutional ownership on productivity without interacting this variable with other corporate governance proxies. The regression shows that the level of institutional ownership affects positively the productivity of the firm. This result is consistent with hypothesis 4 and statistically significant at a 10 percent level. This result is also consistent with that in Min and Smyth (2014) for a sample of Korean firms.

Column 6 shows the coefficients associated to the panel data regression of TFP on all the corporate governance variables with the exception of CEO-Chair duality whose effect on productivity seems to be nonexistent. Results again are statistically significant and consistent with (1) a non-linear relationship between the number of members in the corporate board and productivity, (2) a negative relationship between board gender diversity and productivity, (3) positive effect of institutional ownership and productivity and finally (4) a negative relationship between board independence and productivity. The model in the last column of table 3 shows the joint effect of board independence and institutional ownership. The panel data regression shown in column 8 presents results similar to the ones explained in column 7 but we add a variable whose value results from interacting the variable board independence with a dummy variable that takes the value of 1 if the institutional ownership is greater than 80 percent and zero otherwise. We name this dummy variable institutional control dummy. The coefficient to this interaction variable is positive and statistically significant at a 10 percent level. This result is consistent with hypothesis 2 but under more restrictive conditions. We argue that the level of independence only matters when the voting power of institutional investors is high enough to monitor effectively board decisions that affect productivity. This outcome gives a new vision to Schnatterly and Johnson (2014) findings. They claim that institutional investor preferences for independent boards are at least

partially driven by institutional pressures rather than anticipated reductions in agency costs. Our results could indicate a complementary effect between institutional investors and independent board members in reducing agency cost and increasing productivity. We argue that institutional control creates the right condition so that independent members can provide monitoring, reducing agency costs of equity and improving shareholder returns by increasing firm productivity.

[Insert table 3 here]

To test hypotheses 5, Table 4 and 6 present Panel Data regressions that include board design variables presented in previous tables as well as proxies for the friendliness of the business environment to test the effect that country-level governance properties have on productivity. In Table 4, we use the general Distance to Frontier (DTF) index for each country under analysis to construct a dummy variable that takes the value of one if the distance to frontier (DTF) country governance index is greater than the 75 percentile of the sample value and zero otherwise. Since the World Bank updates annually this general index and all its components, each of year during the period 2006-2014 we classify each of the countries into two distinctive categories that we named business-friendly and business-unfriendly respectively. In table 4, we interact each of our company-specific governance variables with this dummy variable that categorizes each country each year either as friendly or unfriendly.

Consistent with hypothesis 1, previous results about a non-linear relationship between board size and productivity hold in table 4 and are statistically significant.[6] In model 1, we test hypothesis 2 about the effect board independence on productivity. When board independence interacts with the dummy variable that identifies how business-friendly the country is, the negative relationship between independence and productivity is no longer statistically significant. In model 2, we focus the analysis about the importance of board independence in a business-unfriendly environment bringing the result from table 3 about the positive effect that higher independence have on productivity when institutional shareholders have high level of ownership. We interact the board independence with the two dummy variables jointly identifying observations where the country is not friendly to business and there is high level of institutional ownership. The coefficient to this variable is positive and statistically significant at a 5 percent. This result implies that higher proportions of independent directors in the corporate board have a positive effect on productivity if the institutional / governance environment of the country where the company resides is unfriendly to businesses and independent board members have the support of institutional shareholders. This outcome shows how the specific context of each company coupled with a diverse country environment lead to variations in the effectiveness that independent board members have over increasing firm productivity. Not only the interaction of board independence with ownership structure, but also with country level aspects, have an important influence over the effectiveness of board independence on productivity. Our results indicate that while the interaction independent members / institutional

---

[6] We test the effect that board size has on productivity under the two business-friendly categories and find no meaningful differences. Therefore, for simplicity, we do not include them in our results.

ownership has a complementary effect on improving firm productivity, a possible substitution effect could exist between that interaction and country-specific conditions, like how business-friendly is the country where the company bases its operations.

In model 3 of table 4, we interact the effect of institutional ownership control with the country-level governance dummy variable that identifies business-friendly countries in any given year. Results are consistent with the positive and statistically significant effect that institutional control has on productivity. However, this effect is only significant when the country-level governance environment is unfriendly to corporations. Finally, model 4 shows the joint effect that gender diversity in the board and the business environment have on productivity. First, a higher proportion of female members in the board no longer drives productivity down when the country is business-friendly. The negative relationship between gender diversity and productivity only exists in the sample of countries classified as not friendly to business.

[Insert table 4 here]

The design of table 5 is similar to that of table 4, but we use the Distance to Frontier (DTF) associated to enforcing contracts instead of the general index. We construct a dummy variable that takes the value of one if the distance to frontier (DTF) enforcing contracts index is greater than the 75 percentile of the sample value and zero otherwise. High DTF of the component enforcing contracts means that is easier to enforce a contract for a corporation if the counterparty in a business transaction is not complying with the contract. This is the closest proxy we can get for the quality of the legal system in a region where civil law is the legal code of all the countries in our sample of Latin American publicly traded firms.

When the contract enforcement is difficult, the empirical relationships between institutional control and productivity (model 3) and between the level of board independence and productivity when institutional control is high (model 2) are similar to the ones in table 4. In table 5 however, we find that a higher level of board independence is associated to a lower level of productivity only when is difficult to enforce a contract. This result is statistically significant at a 10 percent level. Finally, a higher proportion of female board members is associated with lower productivity levels even in the subsample of countries where contract enforcement is easier.

[Insert table 5 here]

Conclusion

We study the relationship between corporate governance and productivity in a sample of publicly trading non-financial firms based in Latin America. Performing Panel Data regressions, we show that board size, institutional ownership, the presence of independent directors, and the proportion of female directors in the board of directors affect the firm's productivity in Latin America. We find evidence consistent with a non-linear relationship between board size and productivity, which suggest an optimal size. Consistent with the literature about financial performance, we find positive and statistically significant evidence about the effect that institutional ownership has on productivity.

In contrast to results obtained by Reddy et al. (2008), and Shan and McIver (2011) for New Zealand and Chinese

companies respectively, we find a negative relationship between board independence and productivity in Latin America. However, when we further control by the level of institutional ownership, we find that a higher proportion of independent directors in the board is conducive to higher productivity. We argue that the level of independence matters when the voting power of institutional investors is high enough to monitor effectively board decisions that affect productivity. However, further research is necessary to evaluate the cause of this empirical relationship.

We also study the effects of corporate governance on productivity under two country governance proxies: how friendly is the country to business and how difficult is to enforce a contract, using Distance to Frontier indicators developed by the World Bank. We find that when board independence interacts with the dummy variable that identifies how business-friendly the country is, the negative relationship between independence and productivity is no longer statistically significant. More specifically, when the country is not friendly to business and there is high level of institutional ownership, the level of board independence positively and significantly affects productivity. This result suggest that the country-level governance environment affects the effectiveness of company-specific corporate governance mechanisms, such as the level of board independence. One possibility might be that the monitoring role commonly associated to the profile of an independent director is much more important in environments with business-unfriendly policies and legal systems that make contract enforcement difficult, especially if independent directors have the support of institutional shareholders who jointly can have control of the firm.

Finally, we also find a negative and statistically significant relationship between a greater proportion of female directors and productivity. These results are part of the puzzling evidence about the effect of gender diversity on financial performance. As we mention before, we do not control for risk aversion, experience, and educational background of the directors, factors that might explain this negative relationship.

References:

Adams R. B., de Haan J., Terjesen S., and van Ees H. (2015). Board Diversity: Moving the Field Forward. Corporate Governance: An International Review, 2015, 23(2): 77–82

Aebi, V., Sabato, G., & Schmid, M. (2012). Risk management, corporate governance, and bank performance in the financial crisis. Journal of Banking & Finance, 36(12), 3213.

Allan Chang, A. L., & Shazali, A. M. (2005). Can good corporate governance practices contribute to firms' financial performance? - evidence from malaysian companies. International Journal of Business Governance and Ethics, 1(4), 350-362.

Aggarwal R., Klapper L.L., and Wysocki P.D. (2005). Portfolio preferences of foreign institutional investors. Journal of Banking and Finance. Volume 29, Issue 12, Pages 2919–2946.

Bebczuk, R. (2007). Corporate Governance, Ownership, and Dividend Policies in Argentina, in Investor protection and

corporate governance: Firm level evidence across Latin America, Stanford University Press: New York.

Bulan, L., Subramanian, N., & Tanlu, L. (2007). On the timing of dividend initiations. Financial Management, 36(4), 31-65.

Carter, D. A., B. J. Simkins and W. G. Simpson, 2003, "Corporate governance, board diversity, and firm value". The Financial Review, 38: 33–53.

Carvalhal-da-Silva, A. and Leal, R. (2012). Corporate Governance, Market Valuation and Dividend Policy in Brazil, Coppead Working Paper Series No. 390.

Chen, Z., Du, J., Li, D., & Ouyang, R. (2013). Does foreign institutional ownership increase return volatility? evidence from china. Journal of Banking & Finance, 37(2), 660.

Chiang M-H., and Ling J-H. (2007). The Relationship between Corporate Governance and Firm Productivity: evidence from Taiwan's manufacturing firms. Corporate Governance: An International Review. Volume 15, Issue 5, pages 768–779.

Chong, A. and López-de-Silanes, F. (2007). Investor protection and corporate governance: Firm level evidence across Latin America, Stanford University Press: New York.

Dalton, D. R., Daily, C. M., Johnson, J. L., & Ellstrand, A. E. (1999). Number of directors and financial performance: A meta-analysis. Academy of Management Journal, 42(6), 674-686.

Dalton, D. R., Daily, C. M., S, T. C., & Roengpitya, R. (2003). Meta-analyses of financial performance and equity: Fusion or confusion? Academy of Management Journal, 46(1), 13-26.

Erhardt, N. L., J. D. Werbel and C. B. Shrader, 2003, "Board of director diversity and firm financial performance". Corporate Governance: An International Review, 11(2): 102–11

Eisenberg, T., Sundgren, S. and Wells, M. (1998). Larger Board Size and Decreasing Firm Value in Small Firms, Journal of Financial Economics, 48, 35–54.

Ferreira, P.C., Pessôa, S.D. A., Veloso, F.A. (2013). On the evolution of total factor productivity in Latin America, Economic Inquiry 51.1, pages 16 – 30.

Garay U., and González M. (2008). Corporate Governance and Firm Value: The Case of Venezuela. Corporate Governance: An International Review Volume 16, Issue 3, pages 194–209.

Gonzalez M., Molina C.A., Pablo E., and Rosso J. (2017). The effect of ownership concentration and composition on dividends: Evidence from Latin America. Emerging Markets Review. Volume 30 (March 2017), pages 1-18.

Hay, D. and Morris, D. (1979) Industrial Economics: theory and evidence. Oxford: Oxford University Press.

Hill, C. and Snell, S. (1989). Effects of Ownership Structure and Control on Corporate Productivity, Academy of Management Journal, 32, 25–46.

Himmelberg, C., R. G. Hubbard, and I. Love. (2002). Investor Protection, Ownership, and the Cost of Capital. Working Paper series no. 2834, World Bank.

Jensen M. C. and Meckling W. H., (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics, Volume 3, Issue 4, Pages 305-360.

Johnston, D. (2004). White paper on corporate governance in Latin America, OECD, Paris, France.

Kim E., (2006). The impact of family ownership and capital structures on productivity performance of Korean manufacturing firms: Corporate governance and the "chaebol" problem/ J. Japanese Int. Economies 20 (2006) 209–233.

Köke J. and Renneboog L., (2005). Do Corporate Control and Product Market Competition Lead to Stronger Productivity Growth? Evidence from Market-Oriented and Blockholder-Based Governance Regimes. The Journal of Law & Economics, Vol. 48, No. 2 (October 2005), pp. 475-516.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny (1998). Law and Finance, Journal of Political Economy 106, 1113-1155.

La Porta, R., F. Lopez-de-Silanes and A. Shleifer (1999). Corporate ownership around the world, Journal of Finance 54, 471-517.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny. (2002). Investor Protection and Corporate Valuation. Journal of Finance 57:1147–70.

Leal, P., and Carvalhal-da-Silva, A. (2005) Corporate governance and value in Brazil (and in Chile). Inter-American Development Bank Working Paper, #514.

McConnell, J. and Servaes, H. (1990). Additional Evidence on Equity Ownership and Corporate Value, Journal of Financial Economics, 27, 595–612.

Min B. S. and Smyth R., (2014). Corporate governance, globalization and firm productivity. Journal of World Business. Volume 49, Issue 3, 372–385

Morck, R., Shleifer, A. and Vishny, R. (1988). Management Ownership and Market Valuation: an empirical analysis, Journal of Financial Economics, 20, 293–315.

Mnasri, K., & Ellouze, D. (2015). Ownership structure, product market competition and productivity. Management Decision, 53(8), 1771-1805.

Nickell, S. J. (1996). Competition and corporate performance. The Journal of Political Economy, 104(4), 724.

Nickell, S., Nicolitsas, D., & Dryden, N. (1997). What makes firms perform well? European Economic Review, 41(3-5), 783-796.

Pablo E. (2009). Determinants of cross-border M&As in Latin America. Journal of Business Research. Volume 62, Issue 9, Pages 861–867.

Palia, D. and Lichtenberg, F. (1999) Managerial Ownership and Firm Performance: a reexamination using productivity

measurement, Journal of Corporate Finance, 5, 323–339.

Qian Meijun (2016), Women's Leadership and Corporate Performance, ADB Economics Working Paper Series No. 472. January 2016.

Reddy, K., Locke, S., Scrimgeour, F., & Gunasekarage, A. (2008). Corporate governance practices of small cap companies and their financial performance: An empirical study in New Zealand. International Journal of Business Governance and Ethics, 4(1), 51

Rose, C., 2007, "Does female representation influence firm performance? The Danish evidence". Corporate Governance: An International Review, 15(2): 404–413.

Rubin, A., & Smith, D. R. (2009). Institutional ownership, volatility and dividends. Journal of Banking & Finance, 33(4), 627.

Schnatterly K., Johnson S. G. (2014). Independent boards and the institutional investors that prefer them: Drivers of institutional investor heterogeneity in governance preferences. Strategic Management Journal, 35, 10, 1552–1563

Şeker M., and Yang J.S. (2014). Bribery solicitations and firm performance in the Latin America and Caribbean region. Journal of Comparative Economics. Volume 42, Issue 1, Pages 246–264

Setia-Atmaja, L. (2009). Governance mechanisms and firm value: The impact of ownership concentration and dividends. Corporate Governance: An International Review, 17(6), 694-709.

Shahwan, T. M. (2015). The effects of corporate governance on financial performance and financial distress: Evidence from Egypt. Corporate Governance, 15(5), 641-662.

Shan, Y. G., & McIver, R. P. (2011). Corporate governance mechanisms and financial performance in china: Panel data evidence on listed non-financial companies. Asia Pacific Business Review, 17(3), 301.

Shrader, C. B., V. B. Blackburn and P. Iles, 1997, "Women in management and firm financial performance: An exploratory study". Journal of Managerial Issues, 9: 355–372.

Sinha, R. (2006). Regulation: The market for corporate control and corporate governance. Global Finance Journal, 16(3), 264-282.

Tian, G. Y., & Twite, G. (2011). Corporate governance, external market discipline and firm productivity. Journal of Corporate Finance, 17(3), 403

Veprauskaite, E., & Adams, M. (2013). Do powerful chief executives influence the financial performance of UK firms? The British Accounting Review, 45(3), 229.

Yermack, D. (1996). Higher Market Valuation of Companies with a Small Board of Directors, Journal of Financial Economics, 40, 185–211.

Figure 1

Figure 1 shows the Total Productivity Factor for each of the countries under analysis for the period 2006 – 2014.
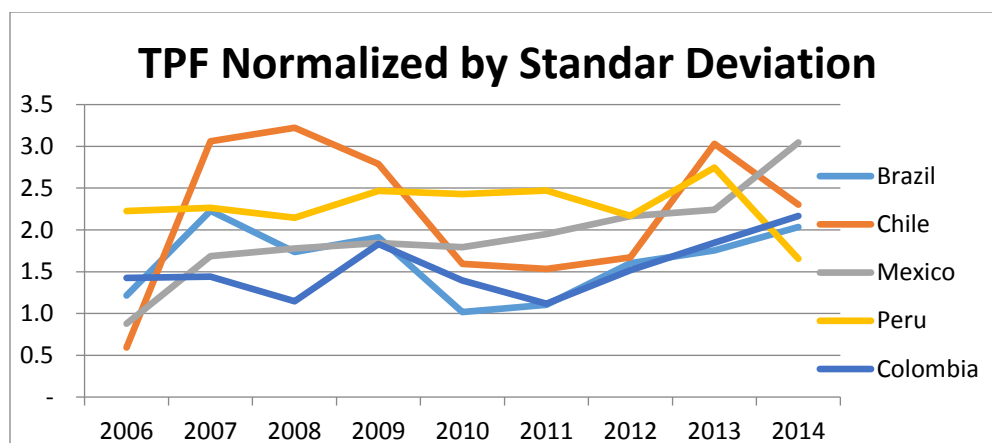
TPF Normalized by Standar Deviation

Table 1

Descriptive Statistics. Table 1 reports the descriptive statistics associated with the sample of Latin American companies under analysis. Mean, median, standard deviation, and 25% and 75% percentiles as well as minimum and maximum values are presented for variables that are organized into three categories: (1) Total Factor Productivity (TFP), (2) corporate governance proxies associated mainly to corporate board design, and 3) firm-specific control variables.

Variable	N	Mean	Median	Minimum	p25	p75	Maximum	Standard Deviation
TFP	652	1.180	0.960	0.0100	0.690	1.490	7.660	0.760
Board Size	667	10.29	9	5	8	12	21	3.380
Independent Directors (%)	670	40.09	40	0	27.27	54.55	100	19.46
Independent Directors (#)	668	4.180	4	0	2	6	13	2.510
CEO-Chair Duality	659	0.120	0	0	0	0	1	0.330
Women on the board (%)	662	6.280	0	0	0	11.11	50	8.550
Institutional Ownership (%)	436	41.94	40.80	0	16.09	64.01	97.54	27.79
Sales	670	10449	3579	0	1749	9035	146318	20945
EBITDA	670	2645	828.4	-7485	403.4	1953	36902	6047
Operating costs	670	7804	2663	-1160	1182	7162	118749	15717
Invested Capital	670	16205	5855	53.13	2521	11822	465757	40704
Total Assets	670	21702	7374	57.26	3152	17041	331564	46587
Leverage	670	1.710	1.120	0.0600	0.690	1.920	12.85	1.830
ROA	670	0.110	0.0900	-0.330	0.0500	0.140	0.590	0.0900

Table 2

OLS estimates of the impact of corporate governance on productivity in Latin America.

Table 2 reports OLS regressions to test the effect of board size, CEO-Chairperson duality, the proportion of independent board members, and the proportion of female board members on productivity. The dependent variable in each regression is the total factor productivity or TFP. In Columns 1 and 3, the log of total sales is our proxy for size while in columns 2 and 4, size is proxied by the log of total assets. Each cell in the table provides coefficient estimates and standard errors in parenthesis. We control for the size of the firm (log of assets / sales), profitability (ROA), leverage (total liabilities over total assets). Although not shown, we use dummy variables to control for years and countries where the company is based. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)
Board Size	0.0310***	0.0188***	0.1031***	0.0734**
	(0.0066)	(0.0056)	(0.0331)	(0.0300)
Squared value board size			-0.0029**	-0.0022*

		(0.0013)	(0.0012)
Independent Board Members (%)	-0.1160***	-0.0846***	-0.1307***	-0.0961***
	(0.0289)	(0.0256)	(0.0297)	(0.0270)
Women on board	-0.0059***	-0.0051***	-0.0055***	-0.0049***
	(0.0014)	(0.0013)	(0.0014)	(0.0013)
CEO-Chair duality	0.0460	0.0117	0.0623	0.0243
	(0.0423)	(0.0379)	(0.0446)	(0.0402)
ROA	7.7585***	8.2198***	7.7330***	8.1939***
	(0.5537)	(0.5462)	(0.5474)	(0.5405)
Leverage	0.1414***	0.1174***	0.1418***	0.1181***
	(0.0166)	(0.0156)	(0.0165)	(0.0155)
Size (ln of sales)	0.0477***		0.0458***	
	(0.0115)		(0.0117)	
Size (ln of assets)		0.1304***		0.1282***
		(0.0108)		(0.0109)
Constant	-0.2933***	-1.0355***	-0.6416***	-1.2913***
	(0.0998)	(0.1207)	(0.1795)	(0.1805)
Observations	613	613	613	613
R-squared	0.7684	0.7980	0.7706	0.7992
Country dummy	yes	yes	yes	yes

Table 3

Panel Data estimates of the effect of corporate governance and Institutional Ownership on productivity in Latin America. Table 3 reports panel data regressions to test the effect of board size, CEO-Chairperson duality, the proportions of independent board and female board members, and institutional ownership on productivity. The dependent variable in each regression is the total factor productivity or TFP. For each dependent variable, the table presents seven panel regressions where the corporate governance variable change. Columns 5, 6, and 7 show the effect that institutional ownership and institutional control have on productivity. Each cell in the table provides coefficient estimates and robust standard errors in parenthesis. We control for the size of the firm (log of assets / sales), profitability (ROA), leverage (total liabilities over total assets). Although not shown, we use dummy variables to control for years and countries where the company is based. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Board Size	0.0637**	0.0686**	0.0640**	0.0455	0.1007***	0.1074***	0.0677**
	(0.0276)	(0.0276)	(0.0273)	(0.0278)	(0.0358)	(0.0358)	(0.0273)
Squared value board size	-0.0020*	-0.0022**	-0.0020*	-0.0013	-0.0037**	-0.0041***	-0.0023**
	(0.0011)	(0.0011)	(0.0011)	(0.0011)	(0.0014)	(0.0014)	(0.0011)
Independent (%)		-0.0015*				-0.0028**	-0.0018**
		(0.0008)				(0.0011)	(0.0008)
Women on board			-0.0040**			-0.0038*	-0.0042**
			(0.0017)			(0.0021)	(0.0017)
CEO-Chair duality				0.0049			
				(0.0440)			
Institutional ownership (%)					0.0012*	0.0014**	
					(0.0007)	(0.0007)	
Independent x Inst. Control							0.0496*
							(0.0300)
ROA	8.3047***	8.2869***	8.3116***	8.3138***	8.5537***	8.5103***	8.2661***
	(0.1920)	(0.1917)	(0.1903)	(0.1895)	(0.2448)	(0.2454)	(0.1901)
Size (ln of assets)	0.1281***	0.1253***	0.1252***	0.1255***	0.1110***	0.1095***	0.1201***
	(0.0118)	(0.0119)	(0.0118)	(0.0117)	(0.0158)	(0.0158)	(0.0119)
Leverage	0.0991***	0.0996***	0.1083***	0.1161***	0.1085***	0.1083***	0.1090***
	(0.0083)	(0.0083)	(0.0086)	(0.0088)	(0.0113)	(0.0113)	(0.0086)
Constant	-1.421***	-1.3415***	-1.3671***	-1.2906***	-1.5361***	-1.3692***	-1.2562***
	(0.1721)	(0.1771)	(0.1715)	(0.1726)	(0.2240)	(0.2296)	(0.1768)
Observations	649	649	643	638	425	421	643

Number of firm	130	130	130	129	108	108	130
Country dummy	yes	yes	yes	yes	yes	yes	Yes

Table 4

Panel Data estimates of the effect of company- and country-level governance on productivity in Latin America.

Table 4 reports panel data regressions to test the effect of corporate governance and Institutional Ownership on productivity under different country-level governance rules. The dependent variable in each regression is the total factor productivity or TFP. For each dependent variable, the table presents four panel regressions where the corporate governance variable change. Each cell also shows the result for two categories of country governance. In table 4, the Distance to Frontier (DTF) of the general index associated to the Easiness of Doing Business developed by the World Bank proxies for quality of the country-level governance. Each cell in the table provides coefficient estimates and robust standard errors in parenthesis. We control for the size of the firm (log of assets / sales), profitability (ROA), leverage (total liabilities over total assets). Although not shown, we use dummy variables to control for years and countries where the company is based. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)
Board Size	0.0872***	0.0829***	0.0819***	0.0835***
	(0.0309)	(0.0307)	(0.0306)	(0.0306)
Sqr board size	-0.0030**	-0.0029**	-0.0029**	-0.0030**
	(0.0013)	(0.0012)	(0.0012)	(0.0012)
Independent x Business-unfriendly	-0.0010			
	(0.0009)			
Independent x Business-friendly	-0.0003			
	(0.0012)			
Ind. x Inst.Control x Business-unfriendly		0.0992**		
		(0.0400)		
Ind. x Inst.Control x Business-friendly		0.0445		
		(0.0921)		
Inst. Control x Business-unfriendly			0.0895**	
			(0.0402)	
Inst. Control x Business-friendly			0.0442	
			(0.0922)	
Women x Business-unfriendly				-0.0045**
				(0.0020)
Women x Business-friendly				-0.0041
				(0.0036)
ROA	8.6097***	8.6366***	8.5879***	8.5709***
	(0.2187)	(0.2185)	(0.2177)	(0.2179)
Size (ln of assets)	0.1261***	0.1306***	0.1218***	0.1229***
	(0.0131)	(0.0130)	(0.0133)	(0.0131)
Leverage	0.0905***	0.0909***	0.0915***	0.0910***
	(0.0093)	(0.0094)	(0.0093)	(0.0093)
Constant	-1.4819***	-1.5027***	-1.4957***	-1.5139***
	(0.1980)	(0.1917)	(0.1913)	(0.1901)
Observations	524	520	524	524
Number of firm	129	129	129	129
Country dummy	yes	yes	yes	yes

Table 5

Panel Data estimates of the effect of company- and country-level governance on productivity in Latin America. Table 5 reports panel data regressions to test the effect of corporate governance and Institutional Ownership on productivity under different country-level governance rules. The dependent variable in each regression is the total factor productivity or TFP. For each dependent variable, the table presents four panel regressions where the corporate governance variable change. Each cell also shows the result for two categories of country governance. In table 5, the Distance to Frontier (DTF) of the component "enforcing contract" that is part of the general index associated to the Easiness of Doing Business developed by the World Bank proxies for quality of the country-level governance. Each cell in the table provides coefficient estimates and robust standard errors in parenthesis. We control for the size of the firm (log of assets / sales), profitability (ROA), leverage (total liabilities over total assets). Although not shown, we use dummy variables to control for years and countries where the company is based. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)
Board Size	0.0685**	0.0669**	0.0621**	0.0623**
	(0.0277)	(0.0275)	(0.0275)	(0.0275)
Sqr board size	-0.0022**	-0.0021*	-0.0020*	-0.0020*
	(0.0011)	(0.0011)	(0.0011)	(0.0011)
Independent x Enforcement difficult	-0.0015*			
	(0.0008)			
Independent x Enforcement easier	-0.0015			
	(0.0012)			
Ind. x Inst.Control x Enforcement difficult		0.0545*		
		(0.0324)		
Ind. x Inst.Control x Enforcement easier		-0.0491		
		(0.0828)		
Inst. Control x Enforcement difficult			0.0566*	
			(0.0328)	
Inst. Control x Enforcement easier			-0.0088	
			(0.0828)	
Women x Enforcement difficult				-0.0033*
				(0.0018)
Women x Enforcement easier				-0.0074**
				(0.0037)
ROA	8.2868***	8.3125***	8.2873***	8.2918***
	(0.1917)	(0.1901)	(0.1922)	(0.1922)
Size (ln of assets)	0.1252***	0.1254***	0.1247***	0.1258***
	(0.0120)	(0.0118)	(0.0120)	(0.0119)
Leverage	0.0996***	0.1080***	0.0995***	0.0993***
	(0.0083)	(0.0086)	(0.0083)	(0.0083)
Constant	-1.3402***	-1.3916***	-1.3979***	-1.4078***
	(0.1796)	(0.1731)	(0.1722)	(0.1718)
Observations	649	643	649	649
Number of firm	130	130	130	130
Country dummy	yes	yes	yes	yes