“Independence of corporate governance and its relation to financial performance”

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INDEPENDENCE OF CORPORATE GOVERNANCE AND ITS RELATION TO FINANCIAL PERFORMANCE

Abstract

Most studies in the area of corporate governance measure certain characteristics and the effects on financial performance; however, other authors only focus on profitability and do not analyze financial performance in all its dimensions; this is relevant because in some situations the government corporate governance can influence performance measured by liquidity, solvency or activity. The aim of the study is to relate the independence of corporate governance and the financial performance of non-listed companies using econometric techniques. This process was carried out by collecting primary information for the independent variable and secondary data for the dependent variable; the independence of corporate governance was measured by applying a confirmatory factor analysis to data collected through a survey, while the financial performance was measured through average Z factors created for liquidity, solvency, profitability and activity indicators. As a result, it was found that the independence of corporate governance influenced financial performance, but this relationship was statistically significant only with solvency and activity variables. As a result, it can be seen that there is a direct relationship between corporate governance independence and financial performance, in such a way that if the perception of board independence increases, financial performance can increase positively.

Keywords corporate governance, independent board, financial performance, non-financial sector, equator, non-listed companies, quantile regression

JEL Classification M14, G32, G34

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INTRODUCTION

Corporate governance (CG) is a very important issue at the organizational level as it helps to keep control on manager actions. The problem with the CG is that the cost of its implementation is many times greater than its benefits. This research aims to demonstrate how CG independence could influence some financial indicators that are not commonly considered.

The aim of the research is to analyze the independence of corporate governance through the performance of independent members of the board and its impact on the financial performance of large companies in Ecuador. Corporate governance is a control mechanism that aims to reduce agency problems and, therefore, maximize the wealth of shareholders. Consequently, it is relevant to study the characteristics of the board and how this, in turn, can contribute to promoting good corporate governance practices.

Weak corporate culture and poor corporate governance are capable of creating incentives for the designation of wrongful and questionable personnel on a company board of directors (Sanda, 2008). Likewise,

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the composition of the board of directors that comprises people with different characteristics may or may not improve financial performance, and this has remained a subject of empirical and theoretical debates. It is widely accepted that the composition of the corporate board could play a vital role in determining the performance of a company. The problem is that the role of independent directors can affect financial performance measured in all its magnitudes, and, therefore, companies often optimize costs when hiring directors without prioritizing independence as a relevant factor.

Bhagat and Bolton (2008) indicated that the adoption of good CG standards is directly related to business operating performance. However, it is not related to future prospects for performance in the stock market. Hassan Che Haat, Rahman, and Mahenthiran (2008) mention that corporate governance influences the performance of companies; however, this relationship occurs at a partial level, but not in all its factors. According to Berthelot, Morris, and Morrill (2010), the CG has a direct influence on the market value of firms and, in addition to this, is related to certain accounting variables. The board's independence studies are focused solely on measuring its relationship with profitability indicators, obviating that financial performance may affect not only profitability indicators, but also liquidity, solvency and activity.

1. LITERATURE REVIEW

1.1. Conceptual review: Director Independence

The most important components of corporate governance are: size of the board, independence of the board of directors, separation of the CEO and the president, financial experience of directors, number of boards, fulfillment of the role of external auditors or also called independent directors (Aggarwal, 2013).

Independent directors are external representatives in charge of preventing and avoiding management misappropriation and reducing corporate disclosure demands; besides, they are people who can pressure corporations to publish more information to demonstrate their transparency (Alkurdi, Hussainey, Tahat, & Aladwan, 2019).

Often, independent directors cannot perform their monitoring effectively due to factors such as: lack of time; no significant exchange of ideas between managers, other independent directors or internal directors as part of time is limited in the boardrooms. Internal managers or directors may give little attention to the way they organize and conceptualize their data, causing independent directors to receive large amount of complex information that will not allow them to effectively analyze data; lack of communication or collaboration, the members of the company must communicate with each other clearly to be effective in the fulfillment of common purposes (Adams, Hermalin, & Weisbach, 2010). The CEO is the most influential internal person, since he or she is the most experienced and informed person in the company. However, his or her influence can be considered as a difficulty for effective monitoring, so it is important to provide effective control and balance of functions on the board (Lipton & Lorsch, 1992).

1.2. Conceptual review: Financial Performance

Financial indicators are defined as a consequence of setting numerical results based on results of financial figures that are not significant in themselves but take strength when compared with previous years or with other companies in the same sector in order to achieve significant results that allow drawing conclusions for making right decisions (Fontalvo, Morelos, & de La Hoz Granadillo, 2012).

Financial performance indicators can be: liquidity, solvency, activity and profitability. Liquidity indicators appear from the need to quantify the ability of corporations to pay their short-term obligations; they are used to determine the difficulty or easiness that a company presents to cover its current liabilities with the purpose of converting its assets into cash currents. Its importance lies in what would happen if the company was forced to immediately cancel all its obligations in a period of less than one year (Fontalvo, De la Hoz Granadillo, & Vergara, 2012).

The financial indicators of liquidity and profitability allow evaluating the organizational performance of corporations under conditions of results (Vásquez, Guerra, & Ahmed, 2008). Examining the impact of financial indicators on the growth and income of corporations is important, since it would help to increase standards or make organizational adjustments; furthermore, it permits prediction of future events to monitor the development of pre-established objectives (Nava & Marbelis, 2009).

The solvency indicators, also known as debt indicators, are those that allow us to know how the corporation finances its assets with debts to third parties; it also reports the ratio between the debt with third parties and its assets (Morelos, Fontalvo, & de la Hoz Granadillo, 2012). Among them are the leverage indicators that are responsible for comparing financing from third parties with the resources of the owners, partners or shareholders in order to define which of the parties presents a greater risk (Fontalvo, De la Hoz Granadillo, & Vergara, 2012).

Activity indicators are also called management or rotation indicators; they try to measure the efficiency with which the company uses its assets according to the speed of recovery of the values applied to them. Finally, profitability indicators, or also called performance or lucrative indicators, allow us to measure the effectiveness of the company's management in controlling costs, spending, and thus transform sales into profits (Fontalvo, De la Hoz Granadillo, & Vergara, 2012).

Previous studies have documented a significant and positive relationship between corporate governance and financial performance (Gürbüz, Aybars, & Kutlu, 2010), that is, it has been shown that the level of corporate governance of companies is certainly related to their financial development (Gruszczynski, 2006). Well-governed companies demonstrate higher value, higher capital returns, and better accounting results compared to poorly governed ones (Makki & Lodhi, 2013).

Companies that have effective corporate governance have positive characteristics such as being more profitable, having a high market value, being competitive, and paying more cash to their shareholders (Makki & Lodhi, 2013). Therefore, companies should strive to improve their corporate governance structure in order to improve their performance through evaluating their leadership ethics, board composition and independence, executive compensation, transparency, stakeholder engagement, and compliance with the law in true letter and spirit (Aggarwal, 2013).

Independent directors with more corporate and financial experience should be able to understand financial statements (Hemathilake & Chathurangani, 2019). It is affirmed that it is crucial to consider liquidity, solvency and profitability as the ability to produce funds that can be used to pay, in amount and time, the accounts with creditors and to produce margin that provides benefits that are subsequently returned to the company (Llanes, 2012).

The impact of the independent board of directors cannot be generalized, since in countries such as Pakistan it was concluded that good corporate governance measures do not bring benefits, since, through standards and disclosure of transparency, they discovered low production and bad practices that harm the financial performance (Makki & Lodhi, 2013).

After reviewing the literature, it becomes apparent that no consensus has been reached on the impact of independence of corporate governance on financial performance, given that some studies have shown the positive relationship between the two, while others demonstrate the opposite. This, in turn, shows the relevance of being able to measure the independent board and the financial performance measured in four main blocks that refer to liquidity, solvency, activity and profitability factors, for which the following hypotheses arise:

H1: The independence of corporate governance is positively related to financial performance.

H1a: The independence of corporate governance is positively related to the liquidity factor.

H1b: The independence of corporate governance is positively related to the solvency factor.

H1c: The independence of corporate governance is positively related to the activity factor.

H1d: The independence of corporate governance is positively related to the profitability factor.

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2. AIM

The aim of the research is to relate the independence of corporate governance and financial performance of non-listed companies using econometric techniques.

3. METHOD

The study used a quantitative approach, with deductive logic and non-experimental design. Two processes were applied, one for measuring the dependent variable and the other for the independent variable. After that, a quantile regression model was formulated.

The first process consisted on measuring the variable independence of corporate governance; the sources of information used were primary due to information compiled by the study through an instrument with five questions that were measured on five-point Likert scales and are shown in Table 1; that is, through questionnaires duly validated by their respective authors (Kassim, Ishak, & Manaf, 2013). A non-probability sampling was used, stratified by sectors with a sample size with a confidence level of 95% and a margin of error of 5%, resulting in 343 directors interviewed. Finally, a confirmatory factor analysis was carried out order to be able to extract indices that explain the independence of corporate governance.

The data collected was subjected to various tests to guarantee the robustness of the results; among the most representative tests is Cronbach's alpha to explain reliability. The Cronbach's alpha was 0.8581, suggesting the reliability of the instrument.

To apply confirmatory factor analysis, assumptions of univariate and multivariate normality were considered to support the factorial model used. After that, the independence structure of the directory was modeled. The statistical methods used allowed the extraction of an index that measured the independent research variable.

The second process was based on collecting secondary information from companies to examine the variable financial performance. The source of information used was secondary, since the study was compiled using available data in the Superintendency of companies. Consequently, relevant financial information was collected on the indicators that measured financial performance. Table 2 shows the most relevant financial performance indicators that were used for this research.

After that, Z-values of each financial indicator were developed to standardize the nature of the variable and, thus, each indicator could be weighted to construct its respective factor. Z-values refer to standard deviation units around the average of a variable. This analysis allowed quantifying the dependent variable.

Table 1. Description of variables

Source: Adapted from Kassim, Ishak, and Manaf (2013).

Variable	Description
IGC	Corporate Governance Independence Performance
IGC.11	Skills to provide strategic visions
IGC.12	Effectiveness of representing the interests of shareholders
IGC.15	Compression on the nature of a business/company
IGC.17	Meetings record the assertive and constructive contributions
IGC.110	Interactively communicate with other board members
ADTrimestral	Quarterly activity of the Board of Directors
TAMACTIVOS	Asset size
TAMCAPITAL	Capital size
PERSONAL	Staff size
AEG	Dummy value of 1 if the firm was audited by a large enterprise
MCI	Number of internal committee members
MCE	Number of external committee members
FAM	Dummy value of 1 if the company is family
SPRIMARIO	Dummy with a value of 1 if the company belongs to the primary sector
SSECUNDARIO	Dummy value of 1 if the company belongs to the secondary sector

Table 2. Financial development indicators

Factor	Indicator	Formula
Liquidity	Current liquidity	$\text{Current Liquidity} = \frac{\text{Current Asset}}{\text{Current Liability}}$
	Acid test	$\text{Acid test} = \frac{\text{Current Asset-Inventories}}{\text{Current Liability}}$
Solvency	Asset indebtedness	$\text{Asset indebtedness} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$
	Patrimonial indebtedness	$\text{Patrimonial indebtedness} = \frac{\text{Total Liabilities}}{\text{Estate}}$
	Indebtedness of fixed assets	$\text{Indebtedness of fixed assets} = \frac{\text{Estate}}{\text{Tangible Net Fixed Assets}}$
	Financial appeasement	$\text{Financial Appeceament} = \frac{\text{Total Assets}}{\text{Estate}}$
Activity	Fixed asset turnover	$\text{Fixed asset turnover} = \frac{\text{Sales}}{\text{Tangible Net Fixed Assets}}$
	Sales rotation	$\text{Sales rotation} = \frac{\text{Sales}}{\text{Total Assets}}$
	Average collection period	$\text{Average collection period} = \frac{\text{Accounts receivable} \cdot 365}{\text{Sales}}$
	Impact of administrative and sales expenses	$\text{Impact of administrative and sales expenses} = \frac{\text{Administrative and sales expenses}}{\text{Sales}}$
	Portfolio turnover	$\text{Portfolio Turnover} = \frac{\text{Sales}}{\text{Accounts receivable}}$
Profitability	Gross margin	$\text{Gross margin} = \frac{\text{Sales} - \text{Sale Cost}}{\text{Sales}}$
	Operational margin	$\text{Operational margin} = \frac{\text{Operational utility}}{\text{Sales}}$
	Net margin	$\text{Net margin} = \frac{\text{Utilidad neta}}{\text{Sales}}$
	Equity operational profitability	$\text{Equity operational profitability} = \frac{\text{Operational profitability}}{\text{Estate}}$
	Net profitability of the asset	$\text{Net profitability of the asset} = \frac{\text{Net profit on sales}}{\text{Sales}} \cdot \frac{\text{Sales}}{\text{Total Assets}}$

A third stage consisted on relating the variables under an econometric model that explained the relationship between the two variables. To make estimates, a quantile regression model was used, considering estimates for quartile two and quartile three.

The specified model responds to the following:

$$DF = \propto_0 + \beta_1 IGC + \\ + \left[\beta_2\ \beta_3 \ldots \beta_n\ \right]\left[x_2\ x_3 \ldots x_n\ \right] + \mu, \quad (1)$$

where *DF* symbolizes the variable financial performance measured in its four factors, *IGC* refers to measuring the independence of corporate governance and $\left[\beta_2\ \beta_3 \ldots \beta_n\ \right]$ refers to the coefficient

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matrix of the model, and finally, $[x_2 x_3 \ldots x_n]$ are the theoretical variables that explain financial performance, and these are control variables as the sector that will serve to control effects due to changes in the branch of economic activity, as shown in Table 2.

To guarantee the robustness of the results, applying tests to measure multicollinearity was considered, as well as trying to guarantee homoscedasticity in the residues. The possible presence of heteroskedasticity was considered in the residuals, so robust standard errors were estimated so that the significance of variables was not affected. To avoid multicollinearity problems, tests were carried out for variance inflation factors, so this type of problem was ruled out.

4. RESULTS

Table 3 shows the Univariate normality test where the variables extracted through the questionnaire showed good adjustment. Table 3 indicates that there are no abnormal problems, as they are within acceptable limits.

Table 3. Univariate normality test – skewness and kurtosis

Observed variables	Asymmetry	Kurtosis
IGC.11	–0.30	–1.12
IGC.12	–1.58	2.08
IGC.15	–0.35	–0.71
IGC.17	–1.33	4.07
IGC.110	–1.59	3.67

The results suggest that the IGC construct approaches a normal distribution. This condition was tested using the Mardia's Test. The Mardia's Test is useful to test normality. The range from –4.9 to 49.1 is a guarantee for multivariate normality; these valuations are between estimates that will still remain unbiased.

In this study, the values of the Mardia Skewness test shown in Table 4 reflect values within the items mentioned by the author, but, for multivariate kurtosis, the observed variables of Independence of corporate governance (IGC) reached 64.11. There is evidence from other authors that obtained indicators near 64. Although in the kurtosis results, the analysis variable is approximately one point higher than the suggested value.

Table 4. Mardia's multivariate normality test

Indicator	Values
Mardia mSkewness	14.43
Mardia mKurtosis	64.11
Henze-Zirkler	29.79

Table 5 analyzes the adjustment measures for confirmatory factor analysis using the maximum likelihood estimation method. The results indicate a good adjustment. The chi-square test p-value is greater than 0.05, which means that data fit the given distribution. Both NNFI/TLI and CFI statistics are observed to be above the expected minimum value of 0.95, which fits good with the model as it approaches one. Also, the RMSEA value is less than the 0.08 maximum expected value.

The SRMR rating is less than the maximum expected value of 0.05. The Determination Coefficient (DC) index is close to or greater than 0.90, therefore, it is within the acceptance levels. In this way, statistical robustness is supported in the extraction of the corporate governance independence index.

Table 5. Goodness of fit indices for the IGC construct

Index	IGC
p > chi2	0.096
RMSEA	0.050
CFI	0.995
TLI/NNFI	0.991
SRMR	0.012
CD	0.907

The financial performance variables registered outliers due to the presence of maximum values very far from the third quartile for the solvency, profitability, activity, and liquidity factors. Consequently, it is necessary to consider that the assumptions of a classical parametric regression model tend to be not fulfilled; this type of situation is very common when using financial variables, therefore, the expected value of a de-

pendent variable should not be represented by the mean, and the median becomes a valid alternative. Given this situation, the estimation of the models is made using a quantile regression that considers the median as the result of the expected value of a dependent variable.

Before estimating each of the models, tests were considered for multicollinearity and homoscedasticity. The centered variance inflation factors (VIF) test was applied to each of the models analyzed, given the nature of the regression test. In each of the regression models, VIF values less than 2 were reported, so it is assumed that there are no multicollinearity problems.

In addition to this, a possible problem of non-homoscedasticity in the residues was considered. Given the presence of possible heteroskedasticity in the residuals, robust standard errors were estimated in the model. Consequently, the econometric model considers adjustments guided by a modern approach to econometrics.

Table 6 shows the comparison of the tests of the liquidity factor model significance. In this regard, it is observed that the variable of interest IGC is still not significant at 5% significance. Estimates show regression models for the median and quartile three.

Table 6. Comparison of liquidity estimates

Liquidity	P > | *t* | P 75	P > | *t* | P 50
IGC	0.539	0.444
ADTrimestral	0.478	0.395
TAMACTIVOS	0.499	0.856
TAMCAPITAL	0.516	0.287
PERSONAL	0.032	0.017
AEG	0.9	0.695
MCI	0.995	0.498
MCE	0.631	0.349
FAM	0.289	0.948
SSECUNDARIO	0.519	0.787
_cons	0.000	0.000

Table 7 shows the comparison of the significance tests of the activity factor model. In this regard, it is observed that the variable of interest IGG is significant at 5% for the quartile two model, while for the regression of quartile three it is significant at 10%. Estimates show regression models for quartile two and quartile three.

Table 7. Comparison of management estimates

Management	P > | t | P75	P > | t | P 50
IGC	0.085	0.016
ADTrimestral	0.668	0.913
TAMACTIVOS	0.733	0.822
TAMCAPITAL	0.136	0.004
AEG	0.854	0.264
MCI	0.719	0.069
MCE	0.651	0.005
FAM	0.225	0.375
SSECUNDARIO	0.001	0.000
_cons	0.593	0.000

Table 8 shows the comparison of the significance tests of the profitability factor model. In this regard, it is observed that the variable of interest IGC is still not significant at 5% significance. Estimates show regression models for the median and quartile three.

Table 8. Comparison of profitability estimates

Profitability	P > | t | P75	P > | t | P 50
IGC	0.417	0.209
ADTrimestral	0.886	0.932
TAMACTIVOS	0.464	0.213
TAMCAPITAL	0.447	0.342
PERSONAL	0.012	0.955
AEG	0.468	0.419
MCI	0.921	0.01
MCE	0.91	0.409
SPRIMARIO	0.062	0.486
_cons	0.579	0.000

Table 9 shows the comparison of the significance tests of the solvency factor model. In this regard, it is observed that the variable of interest IGC is not significant at 5% significance for quartile three; however, for quartile 2, it is significant at 5%. The nature of the financial variables reflects very extreme outliers, which makes the application of quantile regression models viable.

Table 9. Comparison of solvency estimates

Solvency	P > | t | P75	P > | t | P 50
IGC	0.573	0.042
ADTrimestral	0.685	0.309
TAMACTIVOS	0.449	0.452
TAMCAPITAL	0.000	0.001
PERSONAL	0.446	0.320
AEG	0.784	0.746
MCI	0.710	0.859
MCE	0.975	0.631
SSECUNDARIO	0.399	0.485
_cons	0.000	0.775

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5. DISCUSSION

The main objective of this research is to analyze the independence of corporate governance and its relationship to financial performance. This was done using econometric techniques. It was possible to prove that the independence of corporate governance affected financial performance; however, only a statistically significant relationship with the activity and solvency factors was shown.

The obtained results can be compared based on research carried out in the area of corporate governance. Gürbüz, Aybars, and Kutlu (2010) supported the results, since the authors showed significant relationships between corporate governance and financial performance, and Gruszczynski (2006) indicated a significant relationship between corporate governance and financial performance, although these authors used only profitability indicators to explain financial performance. Consequently, the obtained results are supported by findings from other authors.

Finally, it is recommended to continue expanding knowledge in the area of corporate governance to improve control and contribute to the Agency Theory. Future research may seek to assess the impact of the independence of corporate governance on non-family companies and on listed companies. Likewise, the research can be replicated in various countries, whose political reality and the role of the state can be a fundamental factor of control in organizations.

It is advisable to use sophisticated statistical techniques to be able to extract an index measured through a questionnaire, as well as to use standardization techniques to compare indicators that may have different magnitudes. Additionally, large companies are recommended to consider creating a board of directors with independent characteristics, in such a way that the objective of maximizing shareholder wealth can be guaranteed.

CONCLUSION

The first part of the model was to extract an indicator of independence of Corporate Governance through a confirmatory factor Analysis. After carrying out an analysis of the financial performance factors, we proceeded to extract z-values in order to measure the financial performance variable in each of its factors such as liquidity, solvency, activity and profitability. The construction of the z values allowed to standardize the impact of the different financial performance factors.

After applying a quantile regression model, it was observed that the independence of corporate governance influences the management and solvency factors. Consequently, the logic of the relationship is theoretically supported and knowledge is provided within the corporate governance area.

In conclusion, the variable independence of corporate governance partially influences financial performance. It was observed that the independence of corporate governance influenced activity and solvency factors. Hence, the logic of the relationship is theoretically supported and contributes to knowledge on corporate governance.

Moreover, the relationship with the independence of corporate governance could not be demonstrated in all factors. However, the statistics could demonstrate that the activity and solvency factors were impacted by the variable performance of the independence of corporate governance, while the independence of corporate governance was not related to liquidity and profitability. Consequently, these types of results can be useful for improving corporate governance practices.

AUTHOR CONTRIBUTIONS

Conceptualizations: Gabriela Hurtado, Paola Auquilla.
Data Curation: Félix Carrera, Cesar Freire.

Formal Analysis: Cesar Freire.
Methodology: Félix Carrera, Cesar Freire.
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Validation: Cesar Freire, Felix Carrera, Gabriela Hurtado, Paola Auquilla.
Writing – review & editing: Gabriela Hurtado, Paola Auquilla, Cesar Freire.

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