MANAGERIAL OWNERSHIP, BOARD STRUCTURE AND FIRM'S PERFORMANCE: A REVIEW OF MAIN FINDINGS*

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Abstract: *The objective of this paper is to provide a comprehensive review of the main studies that have investigated the connections between managerial ownership, board characteristics and firm's performance. It discusses the methodological approaches used in researching the ownership's structure – performance relationship, highlighting the main findings and finally proposing directions for further research.*

Keywords: managerial ownership, board structure, firm's performance, endogeneity, corporate governance
JEL Classification: G32, G30, G34

INTRODUCTION

Providing a consistent review of the main contributions of ownership's and board structure related to performance is clearly an objective beyond the scope of this paper. Academics, investors and policymakers from all over the world are paying an increasing attention to the corporate governance, especially to the impact that the ownership's structure as a corporate governance mechanism might have over corporate performance. Much interest has been devoted to corporate governance issues, particularly in the aftermaths of Enron's collapse, with the demand for guidance and certified advice for improving the quality of corporate governance system growing very rapidly.

Following the latest trends of the last decade, some academics have also focused on studying the connections that might be identified between managerial ownership, board structure and performance, using various methodological approaches applied on larges samples, trying to explain as rigorously as possible if and how different corporate governance mechanisms may be interrelated with the firm's performance.

By offering a consistent review of the main findings published within the academic literature related to theownership - performance relationship, this paper intends to provide context for

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valuables debates over the further research directions that may be adopted when studying the incidence of the governance's mechanisms over the performance.

The remainder of the paper is organized as it follows: Section I briefly reviewed the methods and overall results obtained by academics*;* Section II discusses the problem of endogeneity that might influence the research findings in analyzing the link between the ownership's structure and performance. Finally, Section III concludes proposing some directions for further research.

1. METHODS AND OVERALL RESULTS

Consistent with the purpose of this paper, the studies have been taking into account the influence of ownership and board structure as corporate governance mechanisms on corporate performance. After analyzing the main studies identified on this topic, it can be noticed that a good deal of research has been dedicated to various corporate governance issues, but considering the established objective, only the papers addressing particularly the issues interrelated to ownership and performance have been analyzed. The list of empirical studies reviewed is provided in Table 1, along with details on the used methodology, including sample selection, ownership and board's structure variables, research methods and main findings.

Table 1 - Empirical studies focused on ownership, board structure and performance

Study	Sample used	Ownership and board variables	Performance variables	Methods	Results
Ferris and Jagannathan (2001)	A sample of 6089 firms, with 37 774 different directors who represent 45467 directorships.	- Number of directorships held per director - Board equity ownership	- Market-to-book - Total assets - Board size - Operating return on total assets	- Univariate and multivariate analysis - Regression analysis	- A significant positive correlation between corporate operating performance and the number of directorships per director is found. - An inverse relation was observed between the number of directorships per director and the degree of equity ownership by the board.
Gugler and Weigand (2003)	491 listed United States corporations and 167 listed German firms to test for **endogeneity** of insider and large shareholder ownership	Insider ownership defined as the total number of shares held in aggregate by all officers and directors as a percentage of total shares outstanding (available for US	- Return on total assets - Log Total assets - Change in log turnover (firm growth) - Total assets/ employees (capital intensity) - Debt/total assets (capital structure)	- Regression analysis (OSL regressions) - `Method of instrumental variables (IV)	- It is found that total insider holdings are at least in part endogenously determined for US firms. - Large shareholders affect firm performance separately and exogenously, as is the case in the German system - Also, it is suggested that the influence of large

		firms)			shareholders must not be neglected when analysing the impact of ownership on firm's performance.
Pindado, J. and De La Torre, C. (2004)	135 nonfinancial quoted Spanish firms for the period between 1990 and 1999.	The ownership's structure is captured through the measure of ownership concentration in addition to the insider ownership one (it was considered the square of ownership the square and cube of insider ownership as well as concentration)	- Intangible assets - Market share - Firm's size - Debt ratio	- Panel data regression s	- It is found that firm size can be considered as a source of endogeneity of ownership concentration - Also, their findings suggest that this endogeneity is not caused by unobserved heterogeneity but by its simultaneity with value.
Florackis C. (2005)	962 non-financial UK listed firms	- Percentage of shares held by executive directors; - Percentage of shares held by non-executive directors; - Ratio of the number of non-executive directors to the total number of directors; - Number of directors on the board (in logarithm); - Percentage sum of stakes of all shareholders with equity ownership greater than 3% ratio of total remuneration package that is provided to executive directors to total assets (expressed as a percentage);	- Tobin's Q - Firm size is measured as the logarithm of the market value of equity. - Ratio of total debt to total assets; - Ratio of short term debt to total debt	- Cross-sectional regression s	- It is found a significant impact of managerial ownership, non-executive directors and board size over corporate performance. - The findings also suggest other two potential corporate governance mechanisms (*debt maturity and managerial compensation*) as main predictors of firm's performance.
Ghosh S.(2006)	127 listed manufacturing firms in India for 2003	- Board characteristics variables (size and composition) as is Log (Board) – logarithm of size of board of	- Return on assets (ROA) - Performance (PERF) PERF is also employed, which is the arithmetic average of RoA,	Method of instrumenta l variables (I V)	- The findings indicate that the size of the management board exerts a negative influence on performance, irrespective of the measure considered is PERF or AdjQ

		directors - Dummy variables are employed to control for firm ownership (public versus private).	- Return on sales (RoS) and return on equity (RoE). - Adjusted Tobin's Q (AdjQ), defined as the ratio of market value of equity to the book value of debt - Log(TA) – logarithm of total assets netted for depreciation - Cash flows (CFA) defined as cash flows (CFA) minus depreciation as a percentage of total asset minus depreciation - Firm's age defined as the logarithm of number of years since its incorporation - Leverage ratio (LEV) defined as total asset minus equity capital as a fraction of total assets - Percentage share - Price change		- Also, it is found a positive association between the number of non-executive directors and firm performance
Manjon M. (2007)	Panel of firms listed in the Spanish Stock Exchanges between 1991 and 1995.	- Degree of control exercised by large shareholders (the use of ultimate-ownership shares and solutions of voting games (i.e. power indices) as alternative proxies for this control	- Difference between Return on Assets and the opportunity costs of debt and equity. The costs of debt are approximated by (Total assets -Equity) - Interest rate - Financial expenditures and the costs of equity by equity - Interest rate.	- Panel data regressions	- Statistically the degree of control exercised by large shareholders does not have a significant impact on firm performance.
Bhat (2008)	102 retail companies operating in United States	- Insider ownership (proportion of shares held by insiders)	- Inputs from employees, total earning assets (that includes property, plant and equipment and current assets), inventory and selling, general and administrative expenses to produce outputs such as sales, income before	- Data Envelopment Analysis (DEA) - Spearman Rank Correlation	- This study finds positive relationship between performance and insider ownership.

			extraordinary items and stock market values.		
Bayer C. and Burhop C. (2009)	24 member banks of the Preußenkonsortium (bank consortium for the emission of Prussian government debt) from 1874 to 1914 (2910 observations (i.e. managers – board – membership/years), 570 of these fall in the period 1874 to 1883 and the other 2340 observation in the later period 1884 to 1913)	- Total number of members on the board for each year for each company - Time spent by each board member up to the date when he left.	- Average growth rate of total assets and the average dividend yield for each board member from the time he joined the company. - The dividend yield itself is calculated as dividend in year t relative to the share price at the end of year t-1.	- Regression models	- Comparing to studies realised within modern corporate governance systems, there were found significant differences referring to performance turnover relationship. - Therefore, it was found before the reform that managerial leave was unrelated to performance, while after the reform; performance significantly impacted the turnover of managers.
Jiraporn P. and Davidson W. (2009)	5250 observations, 349 (6.65%) belong to the financial industry, while 437 (8.32%) are in utility	- Governance Index (GINDEX) available in the Investor Responsibility Research Center (IRRC)	- Sales - Total assets - Profitability [Earnings Before Interest and Taxes (EBIT)/sales], - Debt ratio - Growth opportunities [Capital Expenditure (CAPX)/sales]	- Univariate and regression analysis	- Financial firms place significantly fewer restrictions on shareholder rights while utility firms impose just as many restrictions on shareholder rights as do firms in unregulated industries

Source: author's own processing based on literature review

2. LINK BETWEEN OWNERSHIP'S STRUCTURE AND PERFORMANCE - A PROBLEM OF ENDOGENEITY?

Many of the reviewed studies are single-country studies and various research methods have been employed for testing the correlations between ownership's and board structure and corporate performance including panel regressions, OLS regressions, and the method of instrumental variables and/or a simultaneous equation model. Carrying out a more detailed analysis of the findings of the many reviewed studies, it could be noticed that

the results are not quite uniform, while for some studies the conclusions shows a positive relationship between ownership's structure and firm performance, and for others it is proved statistically that the impact on firm performance is not a significant one.

Diversity of findings in ownership-board structure-performance studies are explained by the endogeneity problem, because as Gugler and Weigand (2003), Pindado and La Torre (2004), Ghosh (2006) have been remarked, the **endogeneity problem** seems to be a typical one when ownership and board's structure is correlated to corporate performance.

Endogeneity can be defined as a consequence of a reverse causality that might exist between the independent variable and the dependent variable, or in other words, when the dependent variable might actually be the cause of the independent variable. As Bhagat and Black (2002) remarked *"Board composition could affect firm performance, but firm performance can also cause the firm to change its board composition*", this reverse causality determining biased OLS regressions findings.

As other researchers from academic literature (Cho, 1998; Himmelberg et al., 1999) stated, the findings suggest the fact that the researchers have been aware of the effects of endogeneity problem. For instance, Gugler and Weigand (2003), who studied the relationship between ownership structure and performance based on two samples (US firms and Germany firms), have obained different results when they applied tests of endogeneity. Trying to answer to a critical question: '**Where does this endogeneity come from?**', Pindado and La Torre (2004) showed that the main source of endogeneity is the simultaneity between ownership and performance, rather than individual heterogenity. From the point of view of Pindado and La Torre (2004) the solution to control the endogeneity problem is using the method of instrumental variables (IV) or specifying a simulatenous equation model. The same opinion is shared by Ghosh (2006).

But as Bozec (2012) has remarked, the major challenge in using the method of instrumental variables for counteracting the effects of endogeneity is to find the good instrumental variables, *'variables that are correlated with the endogeneous regressor but uncorrelated with the error in the structural equation'*, but even so such methods are quite usually difficult to find and to use. The same opinion was also shared by Renders et al. (2010) who consider that the instruments used in prior research studies are often only weakly correlated with corporate governance, determining inefficient instrumental variables estimates, or furthermore the bias in using instrumental variables (IV) may be more significant than the bias in using OLS regressions (ideas also shared by Bound *et* al., 1995; Nelson and Startz, 1990).

Also, the panel regression is one of the most common research methods to control at least one aspect of endogeneity, named spurious correlation, which according to Bozec (2011) happens when an unobserved variable simultaneously influences governance's mechanisms and corporate performance. In this case, a positive relation between ownership and performance will be noticed, whereas the identified coefficients reflect only a spurious correlation and not necessarly a causal relationship.

But the major question related to research methods is: *it is enough to control only one aspect of endogeneity?* One conclusion is clear, the literature related to the relationship between ownership-board structure-performance has not yet reached to consensus about the best econometric methods that should be employed.

Starting from the premise that the diversity of findings in academic literature related to the governance-performance relationship is given by some inadequacies in the research techniques employed when trying to control all forms of endogeneity; Schultz et al. (2010) proposed a comprehensive model of performance and governance including a range of econometric techniques. Using a dynamic generalized methods of moments (GMM) and robust specification to all forms of endogeneity, Schultz et al. (2010) found no causal relationship between governance and firm performance, concluding that previous findings of significant relationships between ownership and performance uncovered by OLS regressions and panel regressions are the result of spurious correlations.

An interesting solution is offered by Renders et al., (2010) who claims that for controlling the negative reverse causality between performance and ownership and board's structure as corporate governance's mechanisms, it is necessary to consider both endogeneity and sample selection bias.

Renders et al. (2010) starts from the idea that the impact of the corporate governance on corporate performance after controlling endogeneity and selection bias is highly significant, both of them exercising an equally large influence over the results. Too few studies have approached the problem of selection bias together with the endogeneity. In this case, Renders et al. (2010) develop a multi-stage model that could be used and implement in future studies, in which it is simultaneously controlled for both sample selection bias and endogeneity .

CONCLUSIONS

The major objective of this paper was to provide an extensive overview of the main findings focused on the main coordinates of the relationship between corporate governance and firm's performance, trying to highlight potential research directions that should be developed when examining the relationship between ownership, board structure and company performance.

Key issues for further researching studies in ownership-board structure-performance will be the finding of the best econometric research methods that will allow to better mitigate the problem of endogeneity.

As Manjon (2007) observed, further research is absolutely needed on this topic, while ignoring the problem of endogeneity may lead to inaccurate findings. Reflections and discussions over the main studies related to the coordinates of governance-performance relationship should provide a relevant answer to the question: *Where have we been, where are we now and where will have to be in the future*?

REFERENCES:

Bayer, C., Burhop, C. (2009) *If only I could sack you! Management turnover and performance in Great German Banks between 1874 and 1913*, Applied Economics Letters, 16, 141-45.

Bhagat, S., Black, B. (2002) *The non-correlation between board independence and long-term firm performance*, The Journal of Corporation Law, 27, 231-272.

Bhat, V. N. (2008) *Productivity in the retail industry: does insider ownership of shares matter?*, Applied Financial Economics Letters, 4:2, 121-25.

Bound, J., Jaeger, D., Baker, R. (1995) *Problems with Instrumental Variables estimation when the correlation between the Instruments and the endogenous explanatory variable is weak*, Journal of the American Statistical Association, 90**,** 443-50.

Bozec, R. (2012) *The use of governance indexes in the governance-performance relationship literature: International Evidence*, Canadian Journal of Administrative Sciences, 29, 79-98.

Cho, M.H. (1998) *Ownership structure, investment, and the corporate value: an empirical analysis*, Journal of Financial Economics, 47, 103–21.

Ferris, S.P., Jagannathan, M. (2001) *The incidence and determinants of multiple corporate directorships*, Applied Economics Letters, 8, 31-35.

Florackis, C. (2005) *Internal corporate governance mechanisms and corporate performance: evidence for UK firms*, Applied Financial Economics Letters, 1, 211-16.

Ghosh, S. (2006) *Do board characteristics affect corporate performance? Firm-level evidence for India*, Applied Economics Letters, 13, 435-43.

Gugler, K., Weigand, J. (2003) *Is ownership really endogenous?* Applied Economics Letters, **10**, 483-86.

Himmelberg, C., Hubbard G., Palia D. (1999) *Understanding the determinants of managerial ownership and the link between ownership and performance*, Journal of Financial Economics, 53, 353-84.

Jiraporn, P., Davidson, W. (2009) *Regulation, shareholder rights and corporate governance: an empirical note,* Applied Economics Letters, 16, 977-82.

Manjon, M. (2007) *Does the proxy for shareholders' control make a difference in firm-performance regressions? Evidence from a blockholder system of corporate governance*, Applied Economics Letters, 14**,** 445-49.

Nelson, C., Startz, R. (1990) *The distribution of the Instrumental Variables Estimator and its T-ratio when the instrument is a poor one*, Journal of Business, 63, 125-40.

Pindado, J., De La Torre, C. (2004) *Why is ownership endogenous?* Applied Economics Letters, 11, 901–4.

Renders, A., Gaeremynck, A., Sercu, P. (2010) *Corporate governance ratings and company performance: a cross European study*, Corporate governance: an International Review, 18, 87-106.

Schultz E.L., Tan, D.T., Walsh K.D. (2010) *Endogeneity and the corporate governance – performance relation,* Australian Journal of Management, 35, 145-63.