# WHY HAS THE LITERATURE ON CORPORATE GOVERNANCE AND FIRM PERFORMANCE YIELDED MIXED RESULTS?

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**Abstract**

This paper argues that a primary reason for the mixed results observed in the corporate governance and firm performance literature is that the relevant theories have not been applied to the class of phenomena they were designed to explain. For instance, the literature that focuses on ownership structure and firm performance employs entrepreneurial agency theories of the firm but applies them to managerial firms where ownership is separated from control. This is evidenced by the fact that firms in which managerial ownership is close to zero percent are included in the samples. After similarly analyzing other related governance and performance literatures, the paper provides orientation and recommendations for researchers to avoid the identified problems and secure future progress.

**Keywords:** Corporate Governance, Firm Performance, Agency Theory, Firm Lifecycle

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## 1 Introduction

This paper performs a summary and evaluation of the empirical literature in financial economics that studies the relationship between corporate governance and firm performance. As it will be discussed the main debates in this literature have been, for the last three decades, largely motivated by Agency Theory (AT). Specifically, while on the one hand a group of researchers have concentrated their work around the issue of whether ownership structure is related to firm performance in a way that is clearly inspired by the entrepreneurial model of the firm in Jensen and Meckling (1976), a separate group of researchers have focused their efforts in investigating whether certain characteristics of the board of directors are associated to firm performance in a way that is visibly motivated by the managerial model in Fama and Jensen (1983).

Empirical work based on both AT perspectives has not been conclusive. There is considerable controversy surrounding each of the approaches, with one set of researchers arguing that corporate governance affects firm performance, and an opposite camp denying this relationship. Thus, while some researchers argue, and find empirically, that ownership structure is related to firm performance (Morck et al., 1988; McConnell and Servaes, 1990; Hermalin and Weisbach, 1991; Gugler and Yortoglu, 2003), others disagree and contend that controlling for an alleged endogenous relationship between the two variables there is no such effect, and also find empirical support for their position (Demsetz an Lehn, 1985; Himmelberg et al., 1999; Demsetz and Villalonga, 2001; Coles et al., 2012). On the other hand, while some researchers find that the size or composition of the board of directors is related to firm performance (Baysinger and Butler, 1985; Rosenstein and Wyatt, 1990; Yermack, 1996; Callahan et al. 2003; Duchin et al. 2010), others do not find such relationships (Fosberg, 1989; Hermalin and Weisbach, 1991; Bhagat and Black, 2002). Moreover, in this last literature there is an important debate concerning the direction of causality. Particularly, it has been argued that firms react to their realised performance by changing the compositions of their boards, and that for this reason it is not the case that the causal relationship goes from board composition to specific levels of firm performance (Hermalin and Weisbach, 1991; Bhagat and Black, 2002). The present paper evaluates these two debates by arguing that the conflicting results are the consequence of not applying the different AT theories to the class of phenomena they were designed to explain. Clearly, logic requires that entrepreneurial AT should be evaluated based on evidence drawn from a sample of entrepreneurial firms and, on the other hand, that managerial AT should be tested using a sample of managerial firms featuring separation of ownership and control. This paper contends that this has not been the case and that this has caused the observed mixed results in the literature.

In addition, a more recent third approach is reviewed, also related to AT, which pays special attention to managerial entrenchment and it is characterized by the creation of indices of anti-

takeover provisions (Gompers et al., 2003; Cremers and Nair, 2005; Core et al., 2006; Bebchuk et al., 2009; Bebchuk et al., 2013). The main implication of this approach is that entrenched managers can act in their best interests without having to worry too much about potential retaliation from the market for corporate control. This paper argues that one key problem in this literature is that researchers contend that available theory does not provide them with a unambiguous prediction of how the key variables employed may be related to each other and thus they resort to "asking empirical questions" (Gompers et al., 2003).

Finally, this paper examines a fourth approach which is characterized by the use of comprehensive lists of corporate governance variables (Agrawal and Knoeber, 1996; Beiner et al., 2006; Bhagat and Bolton, 2008). This strand of research examines empirically how all-encompassing sets of corporate governance variables relate to firm performance. This paper criticizes this part of the literature by arguing that it is in a pre-theoretical stage since no unambiguous explanation of the relationship between the variables deemed to be relevant is offered.

In view of the lack of conclusiveness, this paper argues that one viable solution to the stalemate would be to develop criteria to determine whether firms are entrepreneurial or managerial and then apply the appropriate theories to samples of firms drawn using such benchmarks. Alternatively, it is suggested that researchers could adopt a firm lifecycle perspective that includes relevant aspects of both entrepreneurial and managerial firms and that therefore is applicable to a sample containing both kinds of firms.

The rest of this paper is organized as follows. Section 2 discusses the debate on whether ownership structure affects firm performance. Section 3 addresses the debate on the relationship between the composition of the board of directors and firm performance. Section 4 reviews the literature on of anti-takeover provision indices and their effect on firm performance. Section 5 discusses empirical work that uses comprehensive lists of governance variables. Section 6 concludes by summarizing the drawbacks in the literature and by suggesting how they may be avoided.

## 2 Ownership structure and firm performance

The relationship between ownership structure and firm performance has been the theme of a major debate in the corporate governance literature. After examining the seminal articles by Demsetz and Lehn (1985) and Morck et al. (1988) and the contributions of other researchers that have examined this issue empirically, this section provides an evaluation of why the debate remains inconclusive and what can be done about it.

### *2.1 Demsetz and Lehn (1985)*

The origin of the debate on the effects that ownership structure may have on firm performance can be traced back to an influential paper by Jensen and Meckling (1976). In this paper we are presented with two outcomes: (a) the partial result that the market value of the firm falls as the percentage ownership of the entrepreneur decreases and (b) the main result that the owner-manager will minimize agency costs because he bears such costs, so that firms maximize "profits, or more accurately, present value" even though the entrepreneur is no longer the sole owner of the firm (Jensen and Meckling, 1976, pp. 307). Based on theoretical work by Demsetz (1983), Demsetz and Lehn (1985) take issue with Jensen and Meckling's (1976) arguments and present a stronger case in favour of the premise that firms maximize profits. According to Demsetz:

> The structure of ownership … is an endogenous outcome of competitive selection in which various advantages and disadvantages are balanced to arrive at an equilibrium organization of the firm.
>
> (Demsetz, 1983, pp. 384)

Consequently, the ownership structures observed in the real world are a function of the characteristics of each particular firm, and are chosen through competitive selection processes in such a way that only those structures that maximize profit (or present value) exist in practice. Thus, according to Demsetz there is no reason to expect a positive correlation between ownership concentration and profit rates.

To investigate the issue empirically Demsetz and Lehn (1985) perform a two stage least squares regression in which, in the key equation, a measure of accounting profit rates (accounting profit after taxes as a percentage of the book value of equity) is regressed on various measures of ownership concentration and control variables. The researchers find an insignificant negative relationship between ownership concentration and accounting profit rate, and conclude that the results support Demsetz's hypothesis. As discussed below, this result has been challenged on the grounds that an inappropriate econometric specification is used. However, perhaps it is more important to emphasize that the real weakness of their argument resides in that there are important facts missing in this theory which, if incorporated to the model, would change its predictions.

Demsetz and Lehn's (1985) theory ignores that managements have at their disposal instruments with which to obstruct market mechanisms that may exert pressure towards a particular ownership structure. In particular, a hostile takeover attempt is regarded, under this perspective, as an aspect of competitive selection processes that bring about a more concentrated ownership structure which is optimal for

a firm which faces a particular situation. Thus, the outcome of the hostile takeover would be to concentrate ownership and thereby mitigate agency costs and ensure profit maximization. However, if the firm deploys anti-takeover provisions such as poison pills, staggered boards, etc. it is not apparent at all that market forces will prevail. In fact the prospective 'corporate raider' may be dissuaded from attempting the hostile takeover in the first place. Therefore, it is unlikely that the ownership structures that are observed in practice reflect the outcome of competitive selection processes that act towards the minimization of agency costs and the maximization of profits.

### *2.2 Morck, Shleifer and Vishny (1988)*

In sharp contrast, Morck et al. (1988) emphasize the partial result in Jensen and Meckling's (1976) model that the market value of the firm falls as the percentage ownership of the entrepreneur decreases, and tend to depart from the chief message of the theory which states that offsetting mechanisms minimize agency costs. In particular, in order to "describe patterns in the data" (Morck et al. 1988, pp. 298), the authors super-impose an entrenchment hypothesis to Jensen and Meckling's incentive alignment hypothesis. The argument is that a manager who possesses a high ownership stake in his firm is effectively entrenched, and can therefore increase perquisite consumption and other agency costs at the expense of shareholders without fear of removal "although perhaps to a more limited extent than if he had effective control but no claim on the firm's cash flows" (Morck et al., 1988, pp. 294).

According to Morck et al. (1988) one can expect a non-linear relationship between ownership concentration and firm performance shaped by the two main forces affecting the relationship between ownership structure and firm performance: (i) Jensen and Meckling's (1976) "convergence of interests hypothesis" which predicts a positive relationship between managerial ownership and firm valuation that is expected to work at all levels of ownership concentration and (ii) their "entrenchment hypothesis" which predicts negative relationship between managerial ownership and firm valuation that is expected to work "for some range of high ownership stakes" (Morck et al., 1988, pp. 294).

In their empirical analysis Morck et al. (1988), use a sample of large publicly held corporations and *experiment* with various piece wise linear regressions. They find a positive relation between ownership concentration and Tobin's q in the 0% to 5% ownership range, a negative and less pronounced relation in the 5% to 25% range, and a further positive relation above 25%. Morck et al. (1988) suggest an interpretation of these results that is consistent with their arguments. According to the authors, the initial rise in Tobin's q (from 0% to 5%) reflects managers' greater incentives to maximize value as their stakes rise. Then in the 5% to 25% interval entrenchment explains the declining valuation of corporate assets as indicated by their entrenchment hypothesis. Finally, at around 25% ownership, it is argued that both the management and the board may be effectively entrenched and thus the increase in Tobin's q for the interval from 25%-100% range may reflect a pure convergence-of-interests effect.

Moreover, to compare their results to those of Demsetz and Lehn (1985), Morck et al. (1988) also investigate the relationship between board ownership and firm performance as measured by the profit rate. When this measure of firm performance is utilized the "qualitative pattern" of estimated coefficients is found to be similar to the Tobin's q regressions, but the statistical significance of the estimates is much lower, and only the positive slope in the 0% to 5% range is significant at the 5% level (Morck et al. 1988, pp. 306). Thus, Morck et al. (1988, pp. 307) conclude that "the failure in Demsetz and Lehn (1985) to find a relationship between ownership concentration and profitability is probably due to their use of a linear specification that does not capture an important non-monotonicity".

The weakness in this work resides in that there are missing parts in the theory. A management team that owns little or no equity can be just as entrenched as an entrepreneur who owns substantial equity. It is clear that an entrepreneur with substantial ownership would have to pay out of its own wealth for a higher fraction of agency costs incurred, and on this account he may wish to reduce them. On the other hand, a management team that owns little or no equity would not have such an incentive to minimize agency costs and, if entrenched using anti-takeover provisions it would have an opportunity to incur them without fear of a possible takeover. Recognition of these facts would change the predictions of Morck et al.'s model.

### *2.3 Further contributions to the debate*

To the critique of Morck et al.'s (1988) arguments above should be added the objection that their work mainly attempts to explain an observed pattern that they find in their data and therefore may be particular to their sample. In this vein, it is possible that their findings may be due to statistical accident rather than economic phenomenon.

For instance, McConnell and Servaes (1990) using larger samples fail to replicate Morck et al.'s (1988) findings and find a different pattern instead. Using ordinary least squares, McConnell and Servaes find a significant curvilinear relation between Tobin's q and the fraction of common stock owned by corporate insiders. For samples corresponding to the years 1976 and 1986 their estimated curves slope upward until insider ownership reaches approximately 40% to 50% and then slope slightly downward.

In addition, although using a different measure of ownership (i.e. holdings by the current CEO and former CEOs still present in the board), Hermalin and Weisbach (1991) find yet another pattern: firstly, at levels of ownership lower than 1% Tobin's q increases with ownership. Then, there is a decreasing relationship at levels of ownership between 1% and 5%, and an increasing one between 5% and 20%. Finally, at levels greater than 20%, Tobin's q decreases with ownership. This work is also interesting in that it employs panel data and instrumental variable methods in order to check that their results are not driven by a particular type of endogeneity of managerial shareholdings.

From the findings in these additional papers it seems likely that the patterns that will be found in the data will depend on the sample employed. McConnell and Servaes (1990) find a curvilinear relationship, while Hermalin and Weisbach (1991) divide ownership concentration in four segments in their piecewise linear specifications rather than the three segments in Morck et al. (1988). Nevertheless, despite the differences found, both papers conclude that their results are consistent with those of Morck et al. (1988).

An interesting exchange in this literature occurred between Himmelberg et al. (1999) and Zhou (2001). In their paper, Himmelberg et al. adopt the perspective put forward by Demsetz (1983) and, in addition, argue that fixed effect estimators should be employed in order to examine the relation between ownership structure and firm performance. Consistent with the Demsetz (1983) view, Himmelberg et al. (1999) find no significant correlation between managerial ownership and firm performance. Prompted by this work, Zhou (2001) demonstrates that while managerial ownership varies significantly across firms it varies very little from year to year within firms. Clearly, this invalidates the appropriateness of using fixed effect approach, since there is only small number of changes over time in the ownership variables, the inclusion of firm fixed effects forces estimation of the coefficients from just these few changes. Hence, Zhou (2001) concludes that Himmelberg et al.'s findings do not offer strong evidence against the view that ownership structure affects firm performance.

In a further contribution, Demsetz and Villalonga (2001, pp. 211) argue that previous work up to that date had failed to take into account an important aspect of ownership structure: "that the fractions of shares owned by outside shareholders and by management should be measured separately" and also that previous work had been flawed in that it failed to take into account the endogeneity of ownership structure hypothesised by Demsetz (1983). Using two stage least squares and a subsample of the original Demsetz and Lehn (1985) sample, Demsetz and Villalonga (2001) find no relationship between ownership structure and firm performance (this time measured using Tobin's q). The weakness in Demsetz and Villalonga (2001), as that in Demsetz and Lehn (1985), remains that there is a failure to recognize that managements generally possess the means with which to obstruct market selection mechanisms that may bring about a particular ownership structure.

In contrast, Gugler and Yurtoglu (2003) employ a new measure of firm performance: the ratio of yearly return on investment to cost of capital or "marginal q". By utilizing the marginal q technique and panel data analysis, the researchers find a significant positive/negative/ positive pattern. The results show a positive relationship between insider ownership and marginal q from 0% ownership to 21.5%, a negative relationship between 21.5% and 63%, and from then on a positive relationship. Nevertheless, Gugler and Yurtoglu's work is still subject to the same objections to the original Morck et al. (1988) paper, namely, there are important parts missing in the theory, and their findings may be due to statistical accident rather than an economic phenomenon.

Finally, Coles et al. (2012) construct a single period structural model of the firm that follows the general idea of Demsetz and Lehn (1985) that managerial ownership and firm performance are jointly determined in equilibrium. In particular, their model proposes that there is no causal relationship between ownership and Tobin's q and that rather they are both jointly determined by the productivity of firm assets in place and managerial input. The authors then estimate the inverse U-shaped relationship between Tobin's q and ownership often found in previous studies and find a maximum Tobin´s q at ownership levels close to 20%. However, they argue that this observed pattern is the result of omitting the productivity parameters proposed in their model which leads to a spurious correlation between management ownership and firm performance. Moreover, it is argued that the inverse U-shaped pattern represents a value maximization relationship between ownership and Tobin's q. Now, one clear limitation of this model is that it only considers one period and therefore it is not possible to consider agency problems that are likely to persist overtime such as the agency costs of free cash flows. Moreover, the model ignores the role of the market for corporate control and the impact that antitakeover provisions may have in the model's contractual setting.

### *2.4 Critical evaluation of the ownership structure-firm performance debate*

To sum up, the debate regarding whether ownership structure affects firm performance remains inconclusive. While one group of researchers argues that there is a relationship between ownership structure and firm performance, there is an opposite group that denies it. Moreover, both camps find corroborating evidence in favour of their respective positions. How can this situation be accounted for?

Clearly, the following observation by Fama (1980) that the firms in the literature following Alchian and Demsetz (1972) and Jensen and Meckling (1976) are strictly entrepreneurial, and as a result fail to explain the large modern corporation in which management owns little or no equity, is relevant:

> The striking insight of Alchian and Demsetz (1972) and Jensen and Meckling (1976) is in viewing the firm as a set of contracts among factors of production… This insight, however, is not carried far enough. In the classical theory, the agent who personifies the firm is the entrepreneur who is taken to be both manager and residual risk bearer. Although his title sometimes changes –for example, Alchian and Demsetz call him "the employer"– the entrepreneur continues to play a central role in the firm of the property-rights literature. As a consequence, this literature fails to explain the large modern corporation in which control of the firm is in the hands of managers who are more or less separate from the firm's security holders.
>
> (Fama, 1980, pp. 289)

Jensen and Meckling (1976, pp. 356) also admit this when they state: "One of the most serious limitations of the analysis is that as it stands we have not worked out in this paper its application to the very large modern corporation whose managers own little or no equity." Thus, we can conclude that by applying models designed to explain entrepreneurial firms without first making sure that their datasets contain entrepreneurial firms only, empirical researchers are misapplying the theory. In this case, an appropriate assessment of the theory calls for the construction of a database from a sample of entrepreneurial firms, followed by the usual hypothesis testing procedures. Until this analysis is carried out properly it is impossible to know if the theory is supported or rejected by the evidence. Consequently, the main criticism raised in this paper concerning the this debate is that there has been a misapplication of entrepreneurial AT in the literature since the papers summarized above clearly included a substantial number of managerial firms in the samples employed. This is evidenced by the fact that that firms in which insider ownership is close to zero percent are included the empirical analyses. Moreover, this suggests that the mixed results are the consequence of testing entrepreneurial AT using samples containing a class of firms the theory was not designed to explain.

Finally, it is important to note that Fama's (1980) contention that the theories by Alchian and Demsetz (1972) and Jensen and Meckling (1976) do not apply to the large modern corporation also explains some of the missing parts in the models examined above. For instance, agency costs of free cash flows and a large number of anti-takeover provisions are not features one would expect to find in a young entrepreneurial firm whose owner-manager is seeking to sell securities to outside investors. Instead, these are characteristics which one would likely associate with a mature managerial firm.

## 3 The compostion of the board of directors and firm performance

To fill this gap, a subsequent paper by Fama and Jensen (1983) extended AT by building a special model for the case of firms in which ownership is separate from control. According to Fama and Jensen (1983, pp. 315) outside directors often hold a majority of seats and "have incentives to carry out their tasks and do not collude with managers to expropriate residual claimants." Thus, parallel to the literature on ownership structure and firm performance in the previous section, a related literature has developed in which the central issue in the debate is to determine whether the proportion of outside directors in the board is associated to firm performance. The key point is to determine if outside directors in the board effectively minimize agency costs as suggested by the managerial model in Fama and Jensen (1983).

### *3.1 The debate concerning board structure and firm performance*

The debate on whether the composition of the board of directors affects firm performance can be described as one between two opposing camps, with a group of researchers who argue that there is a causal relationship that goes from board composition to firm performance and an opposing group denying this association.

One of the earliest papers in this literature is by Baysinger and Butler (1985). Clearly motivated by the theoretical discussion in Fama and Jensen (1983), they investigate whether differences in board independence, and/or changes in board independence, cause financial performance differences across corporations. Baysinger and Butler (1985) find that boards with a higher proportion of independent directors in 1970 enjoyed relatively better records of financial performance in 1980 as measured by Relative Financial Performance (RFP).[i] However, their empirical analysis suggests that there is no significant contemporaneous relationship between board composition and financial performance. Thus, they conclude that board composition has an impact on firm performance, but that the effect is lagged. These results have been challenged on several accounts. First, the objection has been raised that the lag of 10 years used by the researchers seems excessive in order to detect a positive influence of board composition on firm performance (Hermalin and Weisbach, 2003). Secondly, Hermalin and Weisbach (1991) argue that Baysinger and Butler's results are biased because their work ignores an alleged "endogeneity of board structure." In particular,

since there is strong evidence in favour of the hypothesis that "poor performance leads to changes in board composition, … any cross-sectional regression of performance on board composition will be biased because of changes in board composition resulting merely from past performance" (Hermalin and Weisbach, 1991, pp. 102).

Another important paper, Rosenstein and Wyatt (1990), attempts a more direct approach in order to investigate the issue. Rather than examining inter-correlations or employing regression analysis, they rely on standard event time methods in order to examine the effect of the appointment of an outside director by management (as opposed to a selection by a large shareholder or as a result of a proxy contest) on stock returns. They find that clearly identifiable announcements of the appointment of an outside director selected by management are significantly associated with positive abnormal stock returns, thus finding a significant statistical link between board composition and firm performance. Nevertheless this result has also been subject to important criticism. For example, Hermalin and Weisbach (2003) argue that the increase in value that Rosenstein and Wyatt observe could simply reflect the fact that, concurrent to the addition of the new outside director, the company is changing its board structure with a view to improve its efficiency, and thus the increase in shareholder wealth would reflect the changes taking place in the company rather than anything having to do with the new appointed outside director.

Conversely, evidence in favour of the hypothesis that board composition does not affect firm performance is provided by Fosberg (1989). Using paired sample methods Fosberg finds no correlation between board composition and firm performance. Hence he concludes that there is no causal relationship between the two variables.

Additional evidence against the argument that board composition affects firm performance is provided by Hermalin and Weisbach (1991) and Bhagat and Black (2002). These authors point out that the evidence suggests that firms add outside directors following poor firm performance. Accordingly, they argue that the composition of the board of directors is endogenously determined, and that in order to take account of this endogeneity, it is essential to employ simultaneous equation models and/or instrumental variable techniques to study the relevant empirical relationships. Using these methods they find no correlation between board composition and firm performance as measured by Tobin's q and accounting measures (Hermalin and Weisbach, 1991), and no evidence that the strategy of increasing the number of outside 'independent' directors improves firm performance for the three years following the changes (Bhagat and Black, 2002).

Finally, a recent paper by Duchin et al. (2010) takes advantage of the Sarbanes-Oxley Act regulations adopted in 2002 (as well as NYSE and Nasdaq regulations adopted in 2003), which required some U.S. companies to increase the number of outside directors on their boards, to investigate the effect of board composition on firm performance in a setting that is largely free from endogeneity concerns. The authors argue that their key result is that the effect these "exogenous" changes in the proportion of outside directors depended on the cost of acquiring information about the companies. In particular, when information costs were low, an increase in the proportion of outside directors improved firm performance as measured by ROA, Tobin's q and stock returns. However, when information costs were high, an increase in the proportion of outside directors hurt firm performance similarly measured. One important difficulty with this approach, however, is that the authors cannot exclude the possibility that outsiders added to the board to comply with regulations may be different from outsiders added in the normal course of business. Thus, it is not certain that a non-compulsory increase in the proportion of outsiders will have the same effect as that documented in the paper.

### *3.2 Board size and firm performance*

In addition, empirical research has also been undertaken to determine the relationship between board size and firm performance. The starting point of this research is the work by Jensen (1993) and Lipton and Lorsch (1992), who argue that small boards are better monitors of management than large ones for the reason that large boards are likely to suffer from coordination problems. Moreover, it has been contended that agency problems inside the board (such as director free-riding problems) could be greater for larger boards when compared to those in smaller ones (Hermalin and Weisbach, 2003). The upshot is that the performance of large boards should be less efficient when compared to that of smaller boards.

Yermack (1996) evaluates these theories by investigating the relationship between board size and firm performance. The author explicates that his hypothesis is that firm value as measured by Tobin's q is a function of the quality of monitoring and decision-making by the board. Under the assumption that board size is a good determinant of board performance, Yermack argues that there should be negative relationship between firm performance and board size. Therefore, companies with smaller boards of directors should have higher market values. Consistent with his hypothesis, Yermack (1996) finds an inverse relation between firm market value (as measured by Tobin's q) and the size of the board of directors. Moreover, he also finds that firm profitability, as measured by return on assets and return on sales, also exhibit an inverse relationship with board size.

In contrast, Bhagat and Black (2002) find no consistent correlation between board size and various measures of firm performance including Tobin's q,

and accounting measures such as return on assets (ROA). Bhagat and Black (2002, pp. 260) suggest that their results may be different from those in Yermack (1996) because "board size is known to be endogenously related to many other factors that may correlate with performance, including industry, inside share ownership, firm size, and board independence". They conclude that their results cast "doubt on the robustness of any correlation between board size and firm performance" (Bhagat and Black, 2002, pp. 260).

### *3.3 Critical evaluation of the debate on board characteristics and firm performance*

The main critique that this paper puts forward concerning the debate on board characteristics and firm performance is similar to that in the previous section. Specifically, by applying a model constructed especially to explain firms in which ownership is separate from control while not designing their sample selection procedures in a way that guarantees that the databases consist of such firms only, researchers are likely misapplying managerial AT. A correct application of the theory requires that researchers, using some explicit criteria as to what constitutes separation of ownership from control, take steps to insure that their samples contain managerial firms only, and only then attempt to test the theory.

In addition, it is worth noting that by concentrating on Fama and Jensen's (1983) theory researchers in this field tend to ignore the alternative managerial AT theory concerning the agency costs of free cash flows (Jensen, 1986). For instance, one of the most interesting points in the discussion concerns Hermalin and Weisbach's (1991) and Bhagat and Black's (2002) finding that firms add outside directors following poor firm performance. In this connection, an interesting issue would be to check if these firms also suffer from agency costs of free cash flows. It could be the case that the existence of abundant free cash flows which are expected to continue for an extended period of time are the cause of both a deteriorating board structure (since in order to mal-invest the free cash flows the managers would need to weaken board supervision) and a declining Tobin`s q (as managements should be increasingly able to use the free cash flows to invest in negative net present value projects as board quality deteriorates).

Finally, in considering this debate is important to keep in mind that the main disagreement among researchers in this area of the corporate governance literature is not whether the worst or best performing firms are those with larger boards, or those with boards that exhibit a higher proportion of outside directors. Rather, the dispute centres on whether there is a causal link between the larger boards, or the higher proportion of outsiders on the board, and better or worse performance.

## 4 Antitakeover provisions and firm performance

This section reviews empirical work characterized by the use of indices of anti-takeover provisions. The essential point in the works reviewed below concerns the possibility that entrenched managers could act opportunistically without having to worry about the threat of takeover. Note that there exists an earlier literature that investigates the relationship between individual corporate governance provisions, i.e. each provision in isolation, and firm performance. However, since Danielson and Karpoff (1998) have shown that firms utilize governance provisions in groups in order to build their anti-takeover defences and not in isolation, this section concentrates in articles that utilize indices of anti-takeover provisions.[ii]

### *4.1 The Relationship between anti-takeover provisions and firm performance*

The origins of this literature can be traced back to the seminal work by Gompers et al. (2003). Rather than studying ownership structure or board composition Gompers et al. (2003) combine a large set of corporate governance provisions into an index and then utilize this index to investigate empirically if there exists a significant relationship between corporate governance as measured by the index and firm performance. Using information gathered from the Investors Responsibility Research Center (IRRC) on 24 corporate governance provisions, Gompers et al. (2003) create their index by adding one point for each provision which in their view increases managerial power *vis-à-vis* their shareholders. Hence, Gompers et al. argue that one interpretation of the results in their paper is that the balance of power between shareholders and managers may have an impact on firm performance. For this reason, they call their index the "governance index" or "G-index".

Significantly, Gompers et al. (2003) argue that the theories currently available in the literature do not provide them with unambiguous predictions as to how the key variables which they employ in their study may be related to each other. Thus, they state that their work asks an *empirical question*. One difficulty with this approach is promptly revealed in their paper as they find not one, but three possible interpretations as to the meaning of some of the empirical relationships which they find. Moreover, a different problem of interpretation with Gompers et al. approach is reflected in the fact that latter writers in this literature, specially Cremers and Nair (2005) and Brown and Caylor (2004; 2006a; 2006b), have argued that in view of the large number of anti-takeover provisions in the G-index, the index is in fact a measure of anti-takeover protection and not a broad measure of shareholder rights as originally maintained by Gompers et al. (2003).

Using the Fama-Macbeth method, Gompers et al. (2003) find a negative and significant relationship between their G-index and firm valuation as measured by industry adjusted Tobin's q during the 1990-1999 time period. Moreover, Gompers et al. find a negative and significant relationship between the G-index and firm performance as measured by industry adjusted net profit margin and sales growth. On the other hand, they fail to find a significant relationship between the G-index and industry adjusted 'return on equity' (ROE) during the same period. On the whole, these results suggest that firms with low G-index (interpreted as good corporate governance) and good firm performance are positively related.[iii]

### 4.2 Subsequent developments

In contrast to the intense debates discussed in the previous sections, the results in the work undertaken in this literature has been more or less consistent in the sense that although some of the results do not match those in Gompers et al. (2003), most papers find a significant correlation between governance provisions indices, such as the G-index, and at least one measure of firm performance.

Another difference with the previous debates is that an important part of the discussion in this literature has centred on the question concerning whether the governance and performance measurements employed by Gompers et al. (2003) are the most appropriate for the work at hand. For example, Core et al. (2006) suggest that the reason why Gompers et al. (2003) failed to find a relationship between G-index and industry adjusted return on equity is that ROE is not a very good measure of performance because it is affected by discretionary items such as leverage and extraordinary items. For this reason, Core et al. utilize industry adjusted return on assets (ROA) in place of return on equity and find significant evidence that a high G-index is associated with lower operating performance as measured by industry adjusted ROA.

On the other hand, work has also been carried out to determine the relative importance of the anti-takeover provisions in Gompers et al.'s (2003) G-index. For example, Bebchuk and Cohen (2005) investigate the association between staggered boards and firm value during the period 1995-2002. They find that, after controlling for the other governance provisions in the G-index and various firm characteristics, staggered boards are negatively associated with firm value as measured by industry adjusted Tobin's q and that this effect is substantially larger than the average effect of the other provisions.

However, the most important effort to refine the G-index to date has been undertaken by Bebchuk et al. (2009). Bebchuk et al. question the wisdom of using indexes with a large number of provisions due to problems such as the possibility of introducing noise by means of adding innocuous or even beneficial provisions in the index. The danger is that if such innocuous or beneficial provisions are introduced in the index the provisions that really matter would be underweighted. Therefore, to identify the most important governance provisions Bebchuk et al. (2009) form a list of provisions based on discussions with lawyers, their own analysis, and the examination of provisions which attract opposition from institutional investors. This reasoned method allows them to identify a group of six governance provisions which in their view play a key role in the correlation between the G-index and shareholder value, *viz.*, staggered boards, limits to amend by-laws, poison pills, golden parachutes, supermajority requirements for mergers, and supermajority requirements for charter amendments. Finally, using these key governance provisions Bebchuk et al. (2009) create an "entrenchment index" which they label "E-index" by assigning each company a point for each of the provisions in the index that the firm has. Using similar econometric techniques to those in Gompers et al. (2003), Bebchuk et al. (2009) find that controlling for the rest of the IRRC provisions, the provisions constituting the E-index –both individually and in the aggregate– are significantly and negatively correlated with firm value as measured by Tobin's q. In view of these results, the researchers argue that the E-index substantially drives the correlation between the G-index and firm valuation.

In contrast, Bhagat and Bolton (2008) arguing that there may be endogeneity in the relationships among corporate governance, corporate performance and a host of other variables employ a system of simultaneous equations and find results that challenge previous work. While Gompers et al. (2003) and Bebchuk et al. (2009) find a significant correlation between their respective indices and contemporary Tobin's q, Bhagat and Bolton (2008) find no such correlation between both indices and firm performance measured as next year's Tobin's q. On the other hand, they do find a significant correlation between the governance indices and next year's ROA.

Finally, Bebchuk et al. (2013) corroborate the persistence of the negative relationship of between antitakeover indices (both the G-index and the E-index) and Tobin´s q and firm operating performance measures over a longer time horizon than previous studies. While the earlier papers used samples mainly drawn from the 1990s, Bebchuk et al. (2013) document that the relationship between antitakeover indices and firm performance remained strongly negative both during 1990-2001and in the 2002-2008 time period.

### *4.3 Critical review of the approach*

Since most of the papers in this literature find at least some significant relationship between the different governance indices and at least one of the measures of firm performance, the weaknesses in this work seem

to be mainly interpretative, which indicates a lack of theoretical depth. For instance, researchers in this literature have not given completely satisfactory answers to questions such as the following: do a large number of anti-takeover provisions bring about lower firm value or, conversely, do the management of firms with low valuation deploy larger numbers of anti-takeover provisions? Thus, Gompers et al. (2003), Bebchuk et al. (2009) and Bebchuk et al. (2013) are not able to establish the direction of causality driving the relationship between anti-takeover provisions and firm valuation; instead they leave the question open as "a challenge for future research". In this connection, Lehn et al. (2007) have presented results consistent with the hypothesis that the managements of firms with historically low valuations have deployed larger numbers of anti-takeover provisions (since the mid-1980s) rather than the other way around. Unfortunately however, their "test cannot rule out the possibility that a third variable affects both valuation multiples and governance indices; thereby creating a spurious relation between the two variables" (Lehn et al., 2007, pp. 908, n. 1).

Given the lack of a fully developed theory that takes into account aspects of the lifecycle of the firm (i.e. the differences between entrepreneurial and managerial firms) and historical aspects regarding the evolution of institutions in the relevant stock markets (i.e. the tightening of the takeover constraint during the takeover wave of the 1980s), it is understandable that such questions are difficult to answer. It is apparent that a satisfactory answer to this question requires a fully developed theory of corporate governance and firm performance that takes into account both, the ways in which firms change as they go through their lifecycles, as well as the effects of institutional constraints on potential managerial opportunism.

## 5 Empirical work that uses comprehensive lists of corporate governance variables

This section reviews work that employs comprehensive lists of corporate governance variables. The aim of this section is to clarify that work along these lines has not yet addressed the problems mentioned above.

Given that some papers in the governance literature include measurements of ownership structure, board composition, and governance provisions in a single empirical analysis, it may seem that the problem mentioned earlier in this paper to the effect that managerial models should be applied only to managerial firms, and that entrepreneurial models should be applied only to entrepreneurial firms, has already been dealt with in the literature. In considering these papers it may be argued that *new theories* have already been built in order to deal with both types of firms. This section argues that this is not the case and examines this issue with reference to the work of Agrawal and Knoeber (1996), who are the pioneers in this area of research.

### *5.1 Rationale behind work that uses long lists of corporate governance mechanisms*

Agrawal and Knoeber (1996) start their paper by stating that they base their study in two arguments:

> First, since alternative control mechanisms exist, greater use of one mechanism need not be positively related to firm performance. Where one mechanism is used less, others may be used more, resulting in equally good performance.
> Second, the extent to which several of the control mechanisms are used is decided within the firm… [Hence] we expect these choices will be made to maximize firm value. Use of a mechanism will be increased until marginal costs and marginal benefits to the firm are just equal.
> (Agrawal and Knoeber, 1996, pp. 379)

Further, they separate their governance variables into "internal" and "external" mechanisms as follows: "[i]nside shareholding, outside representation of the board, reliance on debt financing, and reliance on external labor markets are all internal decisions. Institutional shareholdings, outside block holdings, and activity in the market for corporate control are decisions made by outsiders" (Agrawal and Knoeber, 1996, pp. 381). Finally, they state their key hypothesis:

> If the four internal mechanisms are selected optimally, a carefully specified cross-sectional regression should find no relation between firm performance and the use of these mechanisms.
> (Agrawal and Knoeber, 1996, pp. 381)

However, after estimating a carefully designed system of simultaneous equations to test their hypothesis, Agrawal and Knoeber find substantial evidence against it: they find a negative and statistically significant relationship between outside representation in the board of directors and firm performance as measured by using Tobin's q (Agrawal and Knoeber, 1996, pp. 379, 393). Similarly, subsequent work carried out along the lines proposed by Agrawal and Knoeber (1996), such as that in Beiner et al. (2006) and Bhagat and Bolton (2008), has also found statistically significant relationships between some of the internal governance variables in their lists and different measures of firm performance.

### *5.2 A theory is more than a list of variables*

Now, a theory is not necessarily rejected *in practice* for failing to predict accurately as long as there is no better alternative (Jensen, 1983; Kuhn, 1970). The

problem in this case, however, is that a theory is more than a list of variables.

More specifically, the trouble is that while the substitution effects in the argument above implies that there should be a negative relationship between the governance mechanisms and no relationship between governance mechanisms and firm performance, in fact the authors stop short of stating specific relationships between their variables:

> Since all of the control mechanisms are alternative ways to provide incentives to managers, each might plausibly be used instead of another. If so, we would expect use of the mechanisms to be negatively related. But this is not the only possibility. Positive relations may also exist… [Several examples follow, and then the authors conclude:] … similar ambiguity exists for the relations between many of the other control mechanisms. Given this ambiguity we cannot test for particular relations but we do explore these relations empirically…
>
> (Agrawal and Knoeber, 1996, pp. 380-381)

Now, according to theory building experts the specification of relationships between the variables is one of the indispensable elements that a fully developed theory must have.[iv] In particular, theories are made of variables, but a list of variables is not a theory. If the relationships between the variables are not clearly and definitely stated, then we only have a list of variables, not a theory (Dubin, 1978; Whetten, 1989). Other researchers working in this area, such as Beiner et al. (2006) and Bhagat and Bolton (2008), have also failed to specify firm theoretical relationships between the variables in their studies. Thus, work in this area may be described as an empirical exploration of data which is considered to be relevant without a fully developed theory capable of explaining both entrepreneurial and managerial firms.

## 6 Conclusion

AT originally started from the perspective that agency costs are merely a production cost like any other, that these are therefore minimized by an entrepreneur owner-manager because he has strong incentives to do so, and that consequently, firms would tend to maximize profits (present value). However, as suggested by Jensen and Meckling (1976), and later firmly emphasized by Fama (1980), the original entrepreneurial AT formulation does not apply to the large modern corporation characterized by diffused ownership and professional management. To close this gap, additional work was undertaken by Fama and Jensen (1983) to show how agency costs would be minimized in managerial firms. The key mechanism in the newer model was the board of directors, which was assumed to be capable of minimizing agency costs in the context of the large managerial corporation. According to this model the firm would also maximize profits (present value).

This paper has reviewed the extant empirical literature on corporate governance and firm performance and finds it inconclusive. Moreover, the paper argues that one important reason is that most researchers in the literature have not paid sufficient attention to the appropriate range of applicability of the available theoretical models. For example, the empirical literature that focuses on ownership structure and firm performance employs entrepreneurial models related to that in Jensen and Meckling (1976). Nevertheless, most researchers in the ownership structure/firm performance literature apply the entrepreneurial theory to managerial firms as well, as it is evidenced by the fact that they consider firms in which managerial ownership is close to zero percent. Conversely, the empirical work centred on the relationship between board composition and firm performance, which is related to the managerial theory in Fama and Jensen (1983), not only does not make sure that the samples consist of managerial firms, but it also ignores the alternative managerial AT theory concerning the agency costs of free cash flows (Jensen, 1986).

Furthermore, this paper argues that the recent empirical literature that studies the relationship between indices of anti-takeover provisions and firm performance lacks theory and it is plagued by problems of interpretation. For instance, researchers find difficulties to determine whether anti-takeover provisions cause poor firm performance or if it is the other way around. In addition, this paper has also discussed empirical work that employs comprehensive lists of corporate governance mechanisms. The paper finds that this literature also lacks a fully developed theory, and that the propositions put forward by these researchers are not consistent with their empirical evidence.

With respect to the non-theoretical literature it is important to remember that causality belongs in the "conceptual domain", that is, in the theoretical world as opposed to the real world of experience (Stewart, 1979, pp. 73). In the real world, we may observe that on every occasion that a certain event occurs it is then followed another particular event, but that is all we can perceive with our senses. However, as Stewart (1979, pp. 65) explains, "a cause can never be observed", if after observing the two events we "introduce the notion of 'cause', it can only be because we have done so out of our own heads." It follows that the methodologically advisable way to proceed is to construct theories with causality included as a feature of each theory, and then try to disprove the different theories using empirical tests. The attempt to determine causality solely through the observation phenomena in the real world will not bear fruit.

Finally, two possibilities to avoid the drawbacks and facilitate future progress can be pointed out. First, the fact that there are two types of AT suggests the possibility of a consolidated framework. In particular, researchers could adopt a firm lifecycle theory that includes relevant aspects of both entrepreneurial and managerial firms which would therefore be applicable to both kinds of firms (e.g. Mueller, 2003, pp. 80-82; Filatotchev and Wright, 2005, pp. 1-5, Saravia, 2014). Moreover, by identifying the stages in the lifecycle of the firm at which antitakeover provisions are more heavily deployed this approach would go a long way in providing insight into the reasons behind the adoption of such provisions and the concomitant low firm performance. Second, another possible solution would be to develop criteria to determine whether firms are entrepreneurial or managerial and then apply the appropriate theories to samples of firms drawn using such benchmarks. Any of these two possibilities would go a long way in solving the present difficulties in the literature of corporate governance and firm performance.

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## Endnotes

I. The endogeneity that Hermalin and Weisbach (1991) discuss is not the one suggested by Demsetz (1983). Rather, the former suggest that managerial shareholdings may be related to performance "for two reasons: first, managers will exercise their stock options after their stock goes up, but not after it goes down; second, managers with information about good future prospects are more likely to buy more stock, while managers with bad information about their own stock are likely to sell".

II. Relative Financial Performance (RFP) is calculated by dividing a firm's return on equity (ROE) by the average ROE of all the firms in its primary industry, including those not in the sample.

III. The older literature on individual corporate governance provisions will not be reviewed but a survey is available in Shleifer and Vishny (1997).

IV. Gompers et al. (2003) also report a trading strategy that yielded risk-adjusted abnormal returns based on the information in the G-index during the 1990s. In so far as this result is part of the "market anomalies" literature, and not part of the corporate governance and firm performance literature proper, we will not examine this issue. For a discussion see Bebchuk et al. (2013).

V. Whetten (1989) argues that there are four elements that all fully developed theories must have, which he summarizes using the words: *what, how, why and where*. "W*hat"* refers to the variables that the theorist regards as relevant to explain the phenomena, "*how"* refers to the relationships between the variables in the theory, "*why"* refers to the reasons why the variables should be related in the way indicated by the theory (behavioural assumptions) and "*where"* refers to the class of phenomena the theory is designed to explain.