

## Article

# Independent Directors and Organizational Performance: New Evidence from A Meta-Analytic Regression Analysis

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**Abstract:** This study not only revisits, from a meta-analytic perspective, the influence of firms' boardroom independence on corporate financial performance, but also addresses the way that countries' social and institutional contexts moderate that connection. A meta-regression covering 126 independent samples reveals that firms' boardroom independence has a positive and negative effect on accounting and market-based measures of corporate financial performance, respectively. Further analyses reveal that while the firms' board independence-financial performance connection is stronger in non-communitarian societies, that relationship becomes weaker in countries with greater developed mechanisms to protect the interest of minority investors. These results are robust to different model specifications and to the presence of a set of methodological control variables. Our results are of outstanding relevance for companies' board composition processes by suggesting the way that corporations should actively re-balance the proportion of independent directors across different social and institutional contexts to ensure their financial success.

**Keywords:** corporate governance; boards' independence; corporate financial performance; meta-analysis; meta-regression

## 1. Introduction

A large body of academic research [1–3] addresses the financial outcomes of different corporate board structures. Among them, some academics (see for example [4,5]), hypothesize on the relationship between enhanced firms' boardroom independence and corporate financial performance (CFP). While some studies find a positive connection [6–9], others argue for a negative influence of board independence on CFP [10–12].

This situation reflects the existing narrative of reviews on board composition and performance, which describe the relationship as mixed, inconsistent, and vexing. Under this controversy, some authors tried to shed some light on that relationship through the development of meta-analytic studies. The first paper was that written by Dalton, Daily, Ellstrand, & Johnson [13], and revealed a little influence of firms' board independence on CFP. Two years later, Rhoades, Rechner, & Sundaramurthy [14] revisited the above-mentioned relationship and addressed that firms' boardroom composition only explained less than one percent of the variation in CFP. Furthermore, they stated that one-third of the findings' variations across firms' boardroom composition studies was a consequence of the

sampling error, thus their results did not reflect the “true differences in the relationship between board composition measures and financial performance” [14], p. 86. It is nearly twenty years since that preliminary evidence. Accordingly, these studies are not able to encompass the significant changes in companies’ boards that appear because of changes in the legal requirements in recent years. (In 2006, the UK Combined Code required that half of the board members should be non-executive independent directors. In 2010, the UK Corporate Governance Code recommended that firms’ boards should have the appropriate balance of skills, experience, independence, and knowledge. The EU Commission’s recommendation 2005/162/EC stated that firms’ boardrooms should show an appropriate balance of executive and managing, and non- executive and supervisory directors, with the objective of avoiding small groups of individuals who could dominate corporate decision-making processes. EU 2014/56 Directive argued for a majority of independent directors for audit committees of public-interest companies. Asian Corporate Governance Association (ACGA) recommended in 2010 the inclusion of independent directors into Asian firms’ boards. The Chinese Securities Regulatory Commission (CSRC) issued in 2001 a guideline requiring listed companies to have at least one-third independent directors. Further initiatives have also been developed in the US, Australia, Brazil, Canada and France). In an attempt to update the earlier meta-analyses, Van Essen, Van Oosterhout, & Carney [15] and Mutlu, Van Essen, Peng, Saleh & Duran [16] examined the effect of corporations’ board independence on CFP. Van Essen et al. [15] focused on Asian firms and addressed a small positive effect of firms’ board independence on CFP. Similarly, Mutlu et al. [16] exclusively focused on Chinese companies and reported that firms’ boardroom independence and CFP were positively associated with CFP.

Although the last meta-analyses on the topic (i.e., [15,16]) can be useful when understanding the connections between some major good corporate governance principles and CFP in Asian companies, two main challenge arises. The first one is related with how the obtained recent knowledge on the firms’ board independence–CFP relationship can be extended to other institutional and social contexts such as Europe or the U.S. The second one, such as revealed by Dalton et al. [13] and Rhoades et al. [14], deals with the fact that further research is required to assess whether some conceptual and methodological moderators enhance or restrict the possible influence of firms’ boardroom independence on CFP. In an attempt to bring some order to this understanding, this paper not only asks the question: “What is the effect of the independence of a firm’s board on corporate financial performance?”, but also; “which factors moderate the relationship between firms’ boardroom independence and organizational performance?” To ask these questions, a meta-analytic regression analysis (MARA) [17,18] is implemented. This technique allows the analysis of the interaction between an internal governance variable (e.g., board independence) and different external variables from the perspective of the “bundle of governance mechanism” [19]. Under this approach, the optimal governance structure should consider a combination of different mechanisms above the effectiveness of a particular governance standard or practice [20,21]. Accordingly, the MARA technique permits us to assess whether a combination of governance mechanisms with other external variables has an influence on CFP.

In fact, we respond to a recent claim made by some academics [21,22], about the need to clarify the role played by international institutional and social contexts in the firms’ boardroom independence–CFP connection. In this way, this paper assesses the way that some conceptual and methodological variables moderate the relationship between firms’ boardroom independence and CFP, those being: (i) CFP measurement approaches (market-based CFP proxies versus accounting-based measures); (ii) market conditions (economic growth versus recession periods); (iii) countries’ legal systems (common law versus civil law countries); and (iv) minority investors protection mechanisms. For robustness reasons, we control for journal quality based on the assumption that this is a reflection of analytical and methodological rigor. Accordingly, this paper will allow us to understand how the firms’ independent directors’ efficiency has evolved and interacts with companies’ CFP since the pioneer works of Dalton et al. [13] and Rhodes et al. [14]. Moreover, this paper contributes to existing literature by addressing how the existence and enforcement of minority investors’ protection mechanisms can

modify the influence of firms' boardroom independence on CFP. Another contribution of the paper is related with the fact that it is able to assess whether different institutional constraints (e.g., countries' legal systems) moderate the connection between companies' board independence and CFP. In this way, this paper complements past research [15,16] by addressing whether different levels in firms' independent directors' efficiency has an influence on companies' financial success. Past research reveals a wide range of CFP measures [23], which are mainly classified into: (i) Accounting-based CFP measures; and (ii) market-based proxies. Because of the different nature of the CFP measures, this paper also contributes to the existing knowledge by capturing the influence of firms' boardroom independence on the two perspectives of CFP (i.e., accounting vs market-based CFP). Finally, it complements Ortas et al. [24], showing that a more independent board of directors plays a major role in promoting the Corporate Sustainability Performance [25] and triple bottom line performance [26], addressing firms contributions to environmental preservation, social welfare, and economic progress [27].

The remainder of the article is organized as follows. The next section presents the theoretical arguments, which lead to the hypotheses' formulation and moderating effects in Section 3. The two subsequent sections describe the method and the meta-analytic results. The results are discussed in detail in Section 6. Section 7 concludes the paper.

## 2. Theoretical Foundations

Theories linking firms' boardroom independence and CFP draw upon studies in agency and resource dependence theory. This section describes how previous research supports a connection between board independence and CFP. Agency theory and resource dependence theory are discussed because they are the most promising explanations of the influence of board independence on CFP. References are made to other theories when relevant.

Previous research [21,28] refers to the independence of corporate boards as a governance mechanism whose effectiveness is determined by the incentives of managers and the ability of board members to monitor the company's management [29–31]. There is a long tradition of independent directors in Anglo-Saxon economies [32–34], which are characterized by high levels of shareholder dispersion [35]. Companies are not controlled and managed by large shareholders, and the control function rests with independent directors [1,2,36]. This control and value-protection mechanism has traditionally been understood in terms of agency theory [37,38]. In the corporate governance context "agency theory implies that adequate monitoring mechanisms need to be established to protect shareholders from management's self-interests" ([7], p. 494). In this context, independent directors mitigate conflicts between shareholders and top management [39–41]. From the agency theory perspective, "independent directors are expected to be more likely to represent shareholder interests and potentially take a stand against the CEO" ([9], p. 450). Independent directors draw on their prior experience to improve the capacity of the board to monitor managers' decisions [37], leading to increased CFP [37,38,42–44]. For example, Rosenstein and Wyatt [45] found that the announcement of the appointment of independent directors in the US market generates an increase in the stock value and shareholder wealth. Other studies [1,46] found that companies with more independent directors are less likely to experience financial distress and are less likely to file for bankruptcy. Overall, from the agency theory perspective, board independence should improve CFP.

Board independence has become a key element of corporate governance and the functions of independent directors were extended from a simple control function to more complicated expectations, such as the need to create corporate value [29,39] and manage the interests and demands of a variety of stakeholders [47,48]. The value creation function of independent directors has been analyzed theoretically using the resource dependence theory [48]. In this approach, "the need for resources, including financial and physical resources as well as information, obtained from the environment, [makes] organisations potentially dependent on the external sources of these resources" [47], p. 12. Pfeffer [48] argues that this dependency can represent an increase in risk, and that companies should establish and maintain a close relationship with the owners of resources. Resource dependence theory

addresses some benefits of increasing the degree of independence of company boards: (i) It increases the range of perspectives, advice, and counsel [49]; (ii) it could add legitimacy to the organization [50]; and (iii) it improves communication, commitment, and access to specific resources [51]. According to resource dependence theory, companies should evaluate the capacity of independent directors to provide critical resources and to assess their impact on CFP [52].

### 3. Literature Review and Hypotheses Development

#### 3.1. Linking Board Independence and Corporate Financial Performance

Previous research comprises several meta-analyses aimed to capture the effect of different corporate governance mechanisms on CFP and even on other dimensions of organizational performance (e.g., corporate social performance). Such meta-analyses mainly focus on a single mechanism or dimension because of two reasons. Firstly, with the objective of avoiding finding a non-significant result because of a possible compensation effect derived from the different impact of the governance mechanisms on CFP. Secondly, the combination of different governance mechanism in a meta-analysis involves reducing the sample of articles, thus the sampling error appears as the main driver of the possible significant results [14]. However, and considering the growing number of papers dealing with these issues due to their interest in the international agenda (both at the institutional and managerial scopes), it will be possible in the near future to ascertain whether a combination of different governance mechanisms enhance or restrict CFP. For those reasons, there are many papers linking only one dimension of corporate governance practices and CFP. For example, Post & Byron [53] and Ionascu et al. [54] focused on one dimension of good governance practices (i.e., board gender composition) on CFP. Based on firms' board independence, Rhoades et al. [14] analyzed its influence on CFP. Dalton, Daily, Johnson, & Ellstrand [55] also carried out a meta-analysis addressing the influence of companies' board size on CFP. Similarly, Rhoades, Rechner, & Sundaramurthy [56] assessed, from a meta-analytic perspective, the relationship between a company's board leadership structure and CFP. Extant research also comprises studies assessing the influence of firms' ownership structures (concentration and dispersion) on CFP [57,58]. Due to the previous reasoning, we decided to focus on only one of the most addressed corporate governance mechanisms in previous research (i.e., firms' boardroom independence). In fact, the present paper not only addresses the influence of corporations' board efficiency on CFP but also assesses how different institutional and social contexts can moderate the above-mentioned relationship. To that aim, previous research on the topic is reviewed and synthesized (see Table A1 for further details).

Extant research comprises a wide range of studies aiming to test a possible relationship between firms' boardroom independence and CFP in different regions: (i) Lefort & Urzua [5] in the Chilean context; (ii) Jackling & Johl [7] focused on a sample of Indian firms; (iii) Honeine & Swan [59] in the Australian context; and iv) Ameer, Ramli, & Zakaria [60] focused on a sample of Malaysian firms. However, the results of extant literature on the topic is vexing and inconclusive. For example, the above-mentioned papers only found a positive and significant influence of firms' board independence on CFP when this latter construct is measured by market-based proxies. Other research [8,61–63] addressed a positive relationship between firms' boardroom independence and CFP when it was measured through accounting-based proxies.

Existing research also contains studies that address a negative influence of boards' independence on CFP. For example, Adams & Ferreira [64], who focused on a sample of US firms, concluded that companies which exhibited enhanced levels of their directors' independence achieved lower CFP. Similarly, Kaczmarek, Kimino & Pye [65] addressed that relationship in the UK context and revealed a negative influence of firms' board independence on CFP. Moreover, Darmadi [66], who focused on a sample of Indonesian companies, addressed a decrease in CFP for those firms with greater levels of board independence. Finally, Terjesen, Couto & Francisco [9] implemented a multi-country approach using data from 3876 public firms in 47 countries and were not able to capture significant dependence

patterns between firms' boardroom independence and CFP. Based on the previous discussion, and according with agency and resource dependence theories, the following hypothesis is proposed to be tested:

**Hypothesis 1 (H1).** *Companies exhibiting greater levels of board independence will achieve higher levels of corporate financial performance.*

### 3.2. Conceptual Moderators

The present meta-analysis is able not only to assess the possible influence of firms' boardroom independence on CFP, but also addresses the way that some conceptual moderators have a role in that relationship. In this section, we develop the arguments aimed to test the possible moderating role of several variables that capture some issues related with countries' institutional and social environments.

#### 3.2.1. Effect of Countries' Legal Systems: Communitarian vs. Shareholder Perspective

Existing research [67–69] has shown that corporate governance models vary significantly across countries with different institutional and social settings.

Haake [70] classified countries as communitarian or individualistic. Communitarian countries (i.e., codified law countries), are found in many continental European countries, defined as “systems in which actors share tight interfaces that turn these parties into interconnected communities” [70] (p. 720). Furthermore, those societies are typified by close and stable relationships between actors, and this situation generates key responsibilities not only towards their controlling shareholders [71]. Individualistic countries, on the other hand, (i.e., those exhibiting a common-law legal system) are mainly found in the US and other Anglo-Saxon countries [71]. Haake [70] (p. 720) defines individualistic business systems as systems “in which actors safeguard their individual autonomy through loose interfaces”.

Ball, Kothari, & Robin [72] found that shareholder dispersion is greater in common law countries, so that companies face significant agency conflicts between managers and shareholders [58]. Traditionally, companies in common law countries have protected shareholders' needs and interests. This is why these countries have been described as having a shareholder orientation. Accordingly, independent directors on companies' boards in common law countries often represent the “voice of the dominant” shareholders and mainly develop control and advice functions.

In contrast with this, shareholder concentration is more likely in communitarian countries [35,70,73]. In these countries, the major agency problems appear between large shareholders and the minority shareholders [58]. Some authors [74,75] have found that communitarian countries pass laws to protect the rights of a wide range of stakeholders, such as workers. This has been described as a stakeholder orientation. In these countries, firms' independent directors are expected to consider not only the shareholders' claims, but also the sensitivities and motivations of key stakeholders. According with this reasoning, the following hypothesis will be tested:

**Hypothesis 2 (H2).** *The relationship between firms' boardroom independence and corporate financial performance is weaker for companies in common law countries.*

#### 3.2.2. The Role of Mechanisms to Protect Minority Investors

Previous research [68,76] indicates that the adoption of legal mechanisms to protect the interests of minority investors are not homogeneous across countries. Bonn, Yoshikawa, & Phan. [77] argue that the financial efficiency of independent directors can vary because different shareholder protection mechanisms are in place. In this way, Ferrarini & Fillippelli [32] found that independent directors of companies in countries with effective investor protection measures may be more likely to use their human and social capital when controlling or providing resources [21], because irresponsible behavior could lead to loss of reputation and judicial liability. In contrast with this, independent directors of



companies in countries with weak shareholder protection are less likely to meet their obligations, thus lowering their efficiency, [78,79]. Accordingly, the following hypothesis will be tested:

**Hypothesis 3 (H3).** *The relationship between firms' boardroom independence and corporate financial performance is stronger in countries with strong minority shareholders' protection mechanisms.*

## 4. Method Features

### 4.1. Sample Selection

More than 2500 articles were identified in existing research using a variety of search techniques (see Field and Gillett, [80] for further details). Some combinations of “board independence, independent directors, board composition, outside directors, corporate financial performance, organizational performance, return on assets, return on sales, growth, return on equity, market return, Tobin's Q, and market-to-book ratio” in the English language were entered into some of the mainstream scientific databases (e.g., Emerald, EBSCO; ProQuest, Wiley Online, Google Scholar, Sciencedirect, Scopus, and SSRN). Unpublished studies, including dissertations on several academic message boards, were requested. Finally, specific journals that usually publish empirical papers on the studied topic (e.g., Corporate Governance: An International Review, International Journal of Economics and Financial Issues, Journal of Accounting and Economics, Journal of Corporate Finance, Journal of Financial Economics) were carefully examined. The above-mentioned searches were concluded in September 2017.

### 4.2. Inclusion Criteria

The first and main inclusion criterion is that the papers needed to be of empirical nature. They must report correlation coefficients between firms' boardroom independence and CFP or the required data to obtain them using alternative conversion methods (see for example, Borenstein, Hedges, Higgins, & Rothstein, [17]; Peterson & Brown, [81]). For example, when the manuscripts did not report correlation coefficients but showed regression coefficients ( $\beta$ ) we transformed them into correlations following Peterson & Brown [81]. That is to say, the computed correlations ( $r$ ) were obtained by  $r = \beta$  (standardized) + 0.05  $\lambda$ , where  $\lambda$  is a variable that equals 1 when  $\beta$  is positive and 0 otherwise. Accordingly, bivariate correlation coefficients were used as effect sizes (see García-Meca, & Sánchez-Ballesta, [82]; Orlitzky, Schmidt, & Rynes, [83]; Wagner, Block, Miller, Schwens, & Xi, [84]). This choice has been widespread in recent meta-analyses linking some corporate governance mechanisms on CFP [53,85]. It is worth mentioning that studies' corresponding authors were contacted when the reported numerical data was insufficient to compute the effect size. No stipulations were imposed on the nationality of the sample or year of publication. Articles were required to show a CFP outcome, such as return on assets, return on equity, return on sales, market return, Tobin's Q or market-to-book ratio. Another criterion is that the effect size must be linked to a unique sample. Following Wood [86], samples reported in more than one articles were excluded, due to their likelihood of being a repeat sample. Finally, the papers must report the data required to test for the moderating effects (or it must be possible to calculate it indirectly). After this process, 126 studies meet the required inclusion criteria (see Table 1). Complete details of the articles in the sample are shown in Table A1 in Appendix A.

This table shows an overview of the primary studies included in the sample. It also shows the percentages of positive effects for each category of primary studies. Data related to the protection of minority investors mechanisms variable has been omitted because it is a continuous variable.

**Table 1.** Summary statistics of meta-analysis sample.

|                                 | Number of Effects | Percentage of Positive Effect Sizes |
|---------------------------------|-------------------|-------------------------------------|
| All Primary Studies             | 126               | 54.76%                              |
| <b>CFP Measure</b>              |                   |                                     |
| Accounting-Based                | 84                | 58.33%                              |
| Market-Based                    | 42                | 47.62%                              |
| <b>Market Conditions</b>        |                   |                                     |
| 2010–2017                       | 30                | 63.33%                              |
| 2007–2009                       | 25                | 40.00%                              |
| 2002–2006                       | 45                | 64.44%                              |
| Before 2002                     | 26                | 38.46%                              |
| <b>Countries' Legal Systems</b> |                   |                                     |
| Civil Law                       | 49                | 57.14%                              |
| Common Law                      | 77                | 53.25%                              |

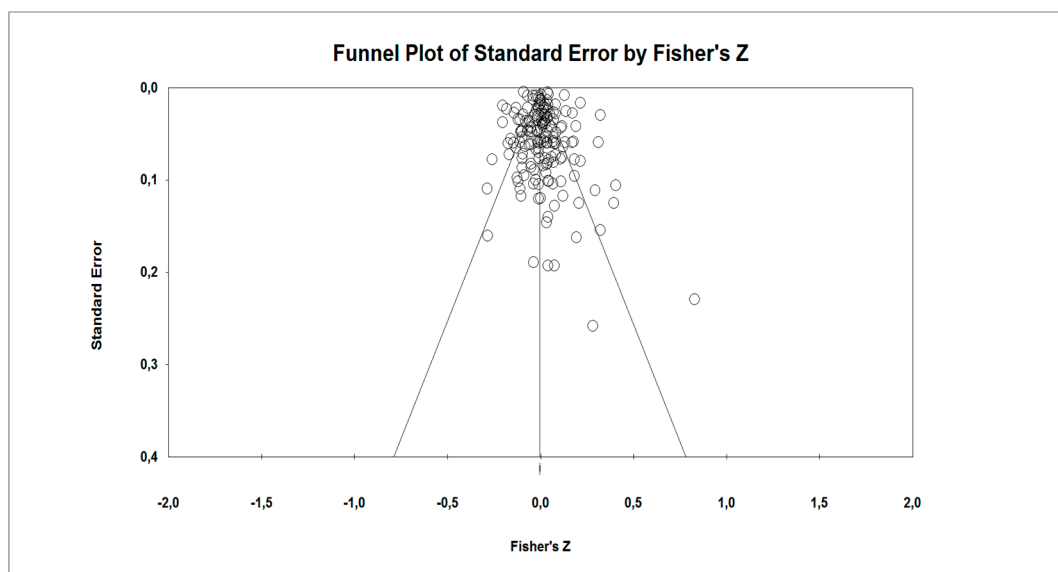
### 4.3. Meta-Analytic Procedure

To test the working hypotheses, a meta-analytical regression analysis (MARA) was implemented (see [16–18]). This approach overcomes some limitations of conventional meta-analytical models (e.g., HOMA) which often use subsets to test the moderators. This is because the MARA approach makes it possible to include and jointly analyze two or more discrete or continuous moderators as predictors in the regression model [17]. The dependent variable comprises the different studies' effect sizes, which in this case represents an estimate of the degree of association between firms' boardroom independence and CFP. We perform a weighted regression and regressed the dependent variable on three hypothesized variables (i.e., CFP, countries' legal systems and mechanisms for the protection of minority investors). Interestingly, and for robustness purposes, the model controls for different methodological artefacts that have been traditionally useful to explain wide variations in companies' boards independence. Those are: (i) Market conditions; (ii) CFP measurement approach; and (iii) journal quality standards.

A random effects (RE) approach was estimated because inferences can be extrapolated outside the sample studies when their characteristics are non-homogeneous. Under this approach, each effect size is weighted by the inverse of its variance, which encompasses the original within-studies variance plus the estimate of the between-studies variance (see for example [17,87]).

Heterogeneity levels were assessed by computing the  $I^2$  statistic provided by Higgins and Thomson [88]. Interpretation of this measure is straightforward, since low values indicate that variability is due to sampling error and high values suggest the inclusion of more moderators in the model to explain the relationship. For each estimated model, we report the percentage of variance not explained by the sampling error (Q-model), and  $R^2$ , reflecting the total variance explained by the moderators [17].

The publication bias was tested through the Rosenthal null tolerance index [89]. The estimated value was 294, which indicates the absence of publication bias. For robustness purposes, a Funnel Plot (Figure 1) was provided to further test for the existence of publication bias.



**Figure 1.** This figure shows a plot of a measure of study size (standard error) on the vertical axis as a function of effect size (Fisher's Z) on the horizontal axis.

The Funnel plot is symmetrical, indicating that the distribution of the 126 studies analyzed is homogeneous and the existence of publication bias is rejected. Finally, we computed the Egger, Davey-Smith, & Minder. [90] t-statistic which has a value of 0.6721 ( $p$ -value = 0.2512), which implies that there is no publication bias.

#### 4.4. Variables' Measures

##### 4.4.1. Countries' Legal Systems

To test for this conceptual moderator, we divided the sample according to the legal system in which the companies of each paper are located. Following Siddiqui [91] and Ortas, Álvarez, & Zubeltzu. [24] we have grouped corporate governance systems into two categories: (i) Common law systems, and (ii) civil or codified law systems. The civil or codified law system was taken as the baseline case.

##### 4.4.2. Minority Investors' Protection Mechanisms

The conceptual moderator extent of investor protection was measured through the value assigned to each country by the minority investors' protection index developed by the World Bank [92]. This index has recently been used in two meta-analyses that focus on board gender composition and CFP [53,85]. In essence, this index reflects the effort of the different countries to defend the interests of stakeholders and minority shareholders over the interests of the majority shareholders and the managers of the companies.

##### 4.4.3. Incidence of Market Conditions (Methodological Moderator)

Previous research has found contradictory evidence of how market conditions influence the financial efficiency of independent directors. While some research [10,93,94] indicates that increasing the level of board independence during bear markets decreases CFP, other studies [95–97] suggest that companies with more independent boards achieve greater levels of CFP during downturns. In fact, during the past two decades, a huge number of recommendations [98], principles [99,100], and governance codes [101–103] were proposed to increase the efficiency of corporations' boards. In general, the proposed guidelines have led to an evolution in corporate boards [104] which often are (i) smaller [105,106]; (ii) more independent [9,106], and (iii) more diverse [64,107]. The most significant changes in board composition have occurred in specific market conditions. Business knowledge and



resource requirements are not the same in bear and bull markets [14]. For example, Zahra [108] argues that companies are more likely to appoint internal directors to their boards in bear markets, usually accompanied by high levels of uncertainty, because they are better informed about the characteristics of the industry in which they are operating and can identify the sources of risk.

This paper addresses the differences in levels of independence of board across time to control for different strategies that boards may adopt (i.e., value maintenance vs. value creation). Four time-periods have been selected. The first runs until 2002, and its end coincides with the proliferation of different governance codes mainly motivated by the economic scandals of the beginning of the century (e.g., Parmalat, Tyco, Worldcom, and Enron) and the outcomes of the Dotcom bubble. The second period runs from 2003 to 2006, when most developed and emerging economies experienced growth. Cuomo, Mallin, & Zattoni. [102] state that during this period (i.e., following the Dotcom bubble) most of the recommendations and regulatory advice on how to shape an efficient board of directors were in line with the postulates of agency theory. Companies appointed more independent directors to strengthen the board's control and to increase efficiency. Two significant examples of this line of thought are the US Sarbanes-Oxley Act of 2002 and the UK Combined Code of 2003. In response to the new requirements, the balance between internal and external directors in company boards shifted to favor diversity and independence [109]. The third period runs from 2007 to 2009, which encompass the recent financial crisis. During this period, further recommendations and regulations were launched with the aim of increasing the corporate boards' efficiency. Those measures have been criticized for their inability to mitigate the negative outcomes of the crisis [110]. In fact, the European Commission [111] argued that the lack of independent directors on boards was one of the primary deficiencies of corporate governance models. The last period runs from 2010 to 2017, and is characterized by the modification of a large number of governance codes (e.g., The UK Corporate Governance Code-2014 & 2016; Principles of Corporate Governance United States 2012 & 2016; German Corporate Governance Code- 2010-2012-2013-2014 & 2015; Japan's Corporate Governance Code-2015) with the aim of altering corporate boards in the following ways [30]: (i) Reducing the number of independent directors, and (ii) strengthening the skills and knowledge of board members [52,98,105,112].

To control for market conditions, a nominal variable was created which ranges from one to four. The time-periods comprised for each category are: (1) Before 2002; (2) from 2003 to 2006; (3) from 2007 to 2009; and (4) from 2010 to 2017. Each paper in the sample was coded according to the period examined in the empirical analysis. The last category (i.e., from 2010 to 2017) was selected as the baseline case. Thus, a positive and significant coefficient for each category reveals that the strength of the effect of board independence on CFP was stronger for that time-period than for the baseline.

#### 4.4.4. Corporate Financial Performance Measurement: Accounting-Based vs. Market-Based Approaches (Methodological Moderator)

Research suggests that board independence can have different effects on CFP as a result of the use of different measurement approaches [7,9,56]. Zahra and Pearce [113] describe two main CFP measurement models: (i) Accounting-based measures and (ii) market-based measures. Although both measures have their advantages and limitations, accounting-based measures of CFP have been criticized because: (i) They can be manipulated by company managers [114,115]; (ii) they systematically undervalue firms' assets [116,117]; and (iii) they cannot be easily understood for firms in different industries and markets [13,118]. However, Orlitzky, Schmidt, & Rynes. [83] argue that accounting-based measures of CFP better address organizational capacity and efficiency. CFP market-based measures comprise market-participant expectations about the ability of the companies to generate value in the long-term [23]. These approaches are better at capturing companies' risk adjusted CFP [115] and reflect the shareholders' requirements more closely [83].

Previous research on the link between board independence and CFP employs a wide range of CFP measurement approaches, including: (i) Return on assets (ROA), return on sales (ROS), and return on equity (ROE) for the accounting [119,120]; and (ii) annual market return, Tobin's Q, and

market-to-book ratio for the market perspective [40,65,121]. Measurement methods have been studied as potential moderators in studies and meta-analyses examining the linkages between CFP and some corporate governance variables, such as board characteristics [14,15,53,56,91]) and ownership structures [58,84,122].

This paper controls for this methodological artefact and responds to a call in the literature [13,14,55] for further research and empirical evidence of such a possible effect. A wide range of CFP measures were identified in the papers analysed, including ROA, ROE, ROS, sales growth, revenue, performance factor, financial and market performance, stock return, Tobin's Q, and market-to-book ratio. The measures can be grouped into two categories: (i) Accounting-based measures; and (ii) market-based measures. This classification was used to categorize the dependent variables because it is widely reported that each category addresses different kinds of organizational performance [123,124]. While accounting-based measures reflect the past capacity of the company to generate profits, market-based measures also incorporate external expectations and perspectives on a firm's future value. Accounting-based measures of CFP were considered to be the baseline (i.e., intercept in Model 2). Thus, a positive and significant coefficient estimated for the second category (i.e., market-based measures) indicates that the strength of the effect of board independence on CFP was stronger when CFP was measured through market-based measures. For robustness purposes, we estimated the different models (Model 3 and 4) for each of the categories of the CFP measurement approach (i.e., accounting and market-based). This approach makes it possible to isolate the effect of some moderators and leads to a better understanding of the effect of board independence on CFP.

#### 4.4.5. Journal Quality Standards (Methodological Moderator)

The method also controls for journal quality standards because papers published in well rated journals are assumed to have a greater impact than those ones published in journals with lesser impact. Based on this assessment, a journal's impact is a reflection of the analytical and methodological rigor, as well as theoretical contributions of the papers. Accordingly, higher quality papers may reveal a different effect from research developed. The model implemented (i.e., MARA) allows using continuous variables. Due to this, journals' quality was measured through three different approaches, this being: (i) the journals' Hirsch factor (h-factor) retrieved from the Web of Science; (ii) the journals' h-factor obtained from the Scimago Journal Rank; and, (iii) by a binary variable that takes the value of 1 if the primary paper is published in a journal with a h-factor greater than the median of the h-factor of all included papers and 0 otherwise.

## 5. Results

The results obtained are reported in Table 2. This section describes the main results provided by the different models estimated. A two-step procedure was followed to ask the research hypotheses and provide relevant information to evaluate the incidence of the conceptual moderators. In a first step, Model 1 was estimated on the full sample of articles to test the overall effect of firms' boardroom independence on CFP. Model 2 was also estimated with the aim of showing the role played by the approach followed to measure CFP on the studied relationship. In a second step, the model with all moderator variables is estimated for two sub-samples of papers: (i) First for the articles that measure CFP through accounting-based approaches (Model 3); and (ii) second for those measuring CFP through market-based approaches (Model 4). Models 3 and 4, which comprise some conceptual and methodological moderators, describe the data fairly well. However, the significant Q-residual reveals the relevance of other moderators with influence on CFP that has not been included in the model [18].

**Table 2.** Results of meta-analytic regression analysis.

|                                  | Model 1 (Full Sample) | Model 2 (Full Sample) | Model 3 (Sub-Sample 1) | Model 4 (Sub-Sample 2) |
|----------------------------------|-----------------------|-----------------------|------------------------|------------------------|
| <b>Overall Size Effect</b>       |                       |                       |                        |                        |
| Intercept                        | 0.0071 (0.0093)       | 0.0220 ** (0.0112)    | 0.0498 *** (0.0265)    | −0.2234 ** (0.1109)    |
| <b>Moderators</b>                |                       |                       |                        |                        |
| CFP Measure (Market-Based)       |                       | −0.0435 ** (0.0191)   |                        |                        |
| 2007–2009                        |                       |                       | −0.0415 * (0.0332)     | −0.0213 (0.0422)       |
| 2002–2006                        |                       |                       | −0.0104 (0.0282)       | 0.0604 * (0.0398)      |
| Before 2002                      |                       |                       | −0.0902 *** (0.0375)   | 0.0255 (0.0431)        |
| Common Law Countries             |                       |                       | −0.0065 (0.0282)       | −0.0631 ** (0.0308)    |
| Protection of Minority Investors |                       |                       | −0.0020 (0.0125)       | 0.0362 ** (0.0183)     |
| Journal Quality                  |                       |                       | 0.0001 (0.0001)        | −0.0002 (0.0001)       |
| <b>Model Additional Data</b>     |                       |                       |                        |                        |
| K                                | 126                   | 126                   | 84                     | 42                     |
| I <sup>2</sup>                   | 93.46%                | 93.44%                | 90.08%                 | 81.39%                 |
| R <sup>2</sup>                   | 0.00                  | 0.06                  | 0.12                   | 0.40                   |
| Qmodel ( <i>p</i> )              | 0.00 [1.00]           | 5.21 [0.02]           | 7.06 [0.21]            | 16.76 [0.01]           |
| Qresidual ( <i>p</i> )           | 1912.55 [0.00]        | 1889.28 [0.00]        | 756.33 [0.00]          | 188.05 [0.00]          |

This table shows the estimates of the meta-analytical regression analysis. Model 1 and 2 focus on the full sample of articles (126). Model 3 focuses on those papers that measure CFP through accounting-based measures (84). Model 4 focuses on those papers that measure CFP through market-based measures (42). Unstandardized regression coefficients are reported. Standard errors are in parentheses and *p*-values are in brackets. K refers to the total number of effect sizes; Q refers to the homogeneity statistic. \* Significant at the 10% level, \*\* significant at the 5% level, and \*\*\* significant at the 1% level.

Model 1, which encompasses all the sample of articles, shows a non-significant overall size effect ( $Intercept = \hat{r} = 0.0071$ ;  $SE = 0.0093$ ;  $p > 0.1$ ). This result suggests a neutral relationship between firms' boardroom independence and CFP. Because of these results, H1 cannot be accepted. It is worth mentioning that this non-significant effect is robust to different methodological specifications. For robustness purposes, this size effect has been computed following the traditional meta-analytical approach provided by Hedges and Olkin [125]. It provided an average correlation coefficient of 0.0075 with a confidence interval at 95% ranging from −0.0008 to 0.0229. These results also do not support the first working hypothesis. However, this non-significant effect of firms' boardroom independence on CFP may be due to the appearance of compensation effects. In fact, accounting-based and market-based measures of CFP represent two different realities of organizational performance [23], with little empirical overlap. Accordingly, Model 2 includes a methodological moderator linked to the different CFP measurement approaches. Results of Model 2 show an overall positive and significant effect size ( $Intercept = \hat{r} = 0.0220$  \*\*;  $SE = 0.0112$ ;  $p > 0.01$ ) when CFP is approached by accounting-based measures and a negative and significant effect size ( $\beta = -0.0435$  \*\*;  $SE = 0.0191$ ;  $p > 0.01$ ;  $\hat{r} = -0.0215$ ). These results support the existence of an effect of board independence on CFP. While there is a positive and significant effect of board independence on CFP when the latter is measured through accounting-based models, the effect becomes negative and significant when CFP is approached through market-based measures. This result makes it possible to answer the first working hypothesis in a more refined way. That is to say, while H1 is supported when CFP is measured through accounting-based approaches, the same hypothesis cannot be accepted if CFP is approached by market-based measures.

According with these results, it seems more appropriate (see [17,18]) to test the last two hypotheses by splitting the sample into two kind of studies: (i) Papers that measure CFP through accounting-based proxies (Model 3); and (ii) by market-based approaches (Model 4). This will avoid overlapping both CFP measurement methods [23], thus providing a better understanding on the effect of firms' boardroom independence on CFP.

H2 argued for a moderating effect of countries' legal systems in the relationship between board independence and CFP. It predicted that the link will be weaker for companies in common law

countries. While the estimates are non-significant for Model 3 (i.e., which only considered the studies that measured CFP through accounting-based approaches), the regression coefficient is negative and significant ( $\beta = -0.0631^{**}$ ;  $SE = 0.0308$ ;  $p < 0.01$ ) when focusing on Model 4 (i.e., which comprises the manuscript which focused on market-based measures to approach CSP). These results reveal that the effect of board independence on CFP is weaker for companies in common law countries only when organizational performance is measured through market-based measures. Accordingly, H2 only cannot be rejected when CFP is measured through market-based approaches.

H3 predicted that the relationship between firms' boardroom independence and CFP is stronger for companies in countries with stronger protection mechanisms for minority shareholders. The regression coefficient is non-significant for Model 3, but the estimate is positive and significant ( $\beta = 0.0362^{**}$ ;  $SE = 0.0183$ ;  $p > 0.01$ ) for Model 4 (i.e., sub-sample of articles using a market-based measure of CFP). This finding addresses that the existence of strong mechanisms aimed at protecting the minority investors' rights stimulate independent directors' efficiency, thus increasing firms' financial wealth. According with these findings, H3 can only be rejected when CFP is measured through market-based approaches.

Robustness checks were conducted to assess the results' reliability. The obtained estimates warrant comment. First, the results reveal a moderating effect of market conditions on the firms' boardroom independence–CFP relationship. In fact, the estimates confirm (see Model 3) that the positive influence of companies' board independence on accounting measures of CFP is weaker under bear market conditions. Furthermore, the estimates of Model 4 find that the negative influence of corporate boards' independence on market-based CFP measures is weaker in bullish markets. The results of the last methodological control variable indicate that journal quality does not moderate the relationship between firms' boardroom independence and CFP. Furthermore, this result is robust to different models' specifications (i.e.,  $\beta = 0.0001$ ;  $SE = 0.0001$ ;  $p > 0.1$  in Model 3 and  $\beta = -0.0002$ ;  $SE = 0.0002$ ;  $p > 0.1$  in Model 4).

## 6. Discussion

Drawing on the framework of Dalton, Daily, Ellstrand, & Johnson [13] and Rhoades, Rechner, & Sundaramurthy [14], this paper addresses that board independence does not act as a catalyst for CFP, thus confirming previous research findings [13–15]. However, we extend previous evidence by showing that this non-significant relationship is a consequence of a compensation effect between the positive/negative link between board independence and CFP, measured through accounting and market-based approaches.

Our results are similar to those obtained by Post and Byron [53], who examined the effect of the gender composition of boards on CFP and found that the presence of women on boards increases the likelihood that companies will maximize the benefits of their investments (i.e., enhance their CFP measured through accounting-based measures). One of the possible reasons for the negative influence of firms' board independence on market-based measures of CFP is that the latter concept incorporates external expectations and perspectives on the company's future value rather than the ability of the company to generate profits from their current assets [23,117]. Our results indicate that market expectations are negative for firms having more directors that are independent. In general, our findings support the idea that independent directors have greater control and influence over accounting performance than market performance [126].

The results also indicate some factors that explain some of the variation in the strength of relationship between board independence and CFP. We find that the negative influence of board independence on market CFP is greater in common law countries than in civil law countries. La Porta, Lopez-de-Silanes, Shleifer, & Vishny [127–129] argue that companies with a common law tradition are more likely to protect dispersed shareholders' interests from management decisions. Common law countries are often classified as having a shareholder orientation, thus prioritizing short-term results. In response, markets penalize companies with greater board independence levels. This finding is in line

with our hypothesis, which predicts that markets will lack confidence in independent directors [126], especially in companies from common law countries.

Further results indicate that the negative effect of board independence on market-based measures of CFP is of less magnitude in companies in countries where there is strong protection of minority investors. This is because, in that situation, independent directors are motivated to be more forceful in their role of protecting shareholders' interests [21]. This finding is in line with previous research [32,77] that finds a "bundle of governance mechanisms" that have an impact [19,130]. This research suggests that the bundle of different mechanisms of corporate governance—both internal (e.g., board structure) and external (e.g., protection of shareholders)—are combined and interact, complementing and even replacing each other in their enhancement of CFP.

The study also addresses that market conditions (i.e., bear and bull markets) play a role in the firms' board independence–CFP connection. Moreover, this moderating effect is different when CFP is measured through accounting- and market-based variables. The positive influence of board independence on accounting-based CFP is less in bear markets. This is because independent directors are more likely to control for financial efficiency in bear markets, focusing on value maintenance (e.g., costs and margins). Independent directors' decisions are likely to be more conservative and have influence on CFP. This finding is in accordance with some proposals of the agency and resources dependence theories [30], which argue that internal and non-independent directors have greater knowledge of a firm's internal functioning and are more efficient in times of market downturns [94,131].

Our results also reveal that the negative influence of board independence on CFP measured through market-based variables is less negative in bull markets. This can be explained by the fact that independent directors prioritize the creation of corporate value [29,39], thus increasing the influence of their decisions on CFP [52]. Moreover, human and relational capital are key factors when selecting independent directors during bull markets [52], so that they can more effectively provide advice and counsel [49]. This provides the organization with the ability to legitimate its activities and access specific resources [50,51], thereby increasing CFP.

## 7. Conclusions, Limitations, and Future Research Agenda

This study addresses, from a meta-regression approach, the extent to which firms' boardroom independence influences corporate financial performance (CFP). Our central results indicate that firms with more independent boards achieve higher and lower CFP when CFP is measured through accounting-based and market-based approaches, respectively. The findings also identify some moderating variables in the above-mentioned connection. Specifically, the positive effect of board independence on accounting-based measures of CFP is less during market downturns. The negative influence of boardroom independence on market-based CFP measures is less in bull markets. These findings are of great importance for company managers and their shareholders in different ways. First, senior management can arrange their boardroom structure as a function of their short and long-term financial objectives and the market conditions with the aim of increasing organizational performance structure of the firm's board and the market conditions. Our results also suggest the value of assessing independent directors' efficiency from the perspective of the "bundle of governance mechanisms" [130,132]. We show that independent directors' financial efficiency is greater for companies in countries with established policies for the protection of minority shareholders. This finding may have interesting implications for policy-makers, agencies managing corporate governance codes, company managers, and investors. In fact, evidence about the demand from institutional investors for mechanisms to protect the rights of minority investors may be extended to other social actors.

This paper has a number of limitations. Among them, the most significant is related to the fact that the blanket measure of independence of a firm's board is not able to capture the ability of different kinds of external and independent directors to manage both financial and non-financial resources. Further research on the topic should be directed to examining the influence of the different types of

independent directors on CFP. Furthermore, there is need to jointly test the influence of boardroom independence on CFP with other internal and external corporate governance mechanisms (such as gender composition, board size, company's board leadership structure, ownership concentration, and institutional ownership, among others) to help companies to manage their board structures and adapt them to different market conditions.

**Author Contributions:** E.Z.-J., E.O. and I.Á.-E. were involved in the conception and design of the experiments. E.Z.-J. performed the experiments and all authors wrote the paper. E.Z.-J. contributed research materials and analysis tools. E.O. and I.Á.-E. participated in the literature review and theoretical foundations. All authors gave thought to the conclusions. All authors read and approved the submitted manuscript.

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## Appendix A

Table A1. Primary studies in meta-analysis.

| Author   | Year | Journal  | Sample Size | Observed Size Effects | Author                          | Year | Journal  | Sample Size | Observed Size Effects |
|--|------|--|-------------|-----------------------|---------------------------------|------|--|-------------|-----------------------|
| Acero & Alcalde  | 2012 | Spanish Accounting Review                                    | 171         | 0.106                 | Jackling & Johl                 | 2009 | Corporate Governance: An International Review                          | 180         | 0.06                  |
| Adams & Jiang  | 2016 | Journal of Banking & Finance                                 | 1168        | 0.2 to 0.31           | Jackowicz & Kowalewski          | 2012 | Emerging Markets Review  | 156         | 0.07                  |
| Adams & Ferreira                                       | 2009 | Journal of Financial Economics                               | 8253        | −0.041 to −0.011      | Javaid-Lone, Ali & Khan         | 2016 | Corporate Governance: The international Journal of Business in Society | 250         | 0.12                  |
| Akpan & Amran  | 2014 | Journal of Finance and Accounting                            | 270         | −0.061                | Jizi                            | 2017 | Business Strategy and the Environment                                  | 1155        | −0.03                 |
| Aman & Nguyen  | 2008 | Journal of the Japanese and International Economies          | 1550        | 0.026 to 0.136        | Jizi, Salama, Dixon & Stratling | 2014 | Journal of Business Ethics   | 291         | 0.13                  |
| Arayssi, Dah & Jizi                                    | 2016 | Sustainability Accounting, Management and Policy Journal     | 975         | −0.033 to 0.039       | Johnson & Greening              | 1999 | Academy of Management Journal  | 252         | −0.12 to −0.03        |
| Arena, Bozzolna & Michelon                             | 2015 | Corporate Social Responsibility and Environmental Management | 288         | −0.112 to 0.168       | Kaczmarek, Kimino & Py          | 2012 | Corporate Governance: An International Review                          | 3106        | 0.04                  |
| Barakat, Pérez & Ariza                                 | 2015 | Review of Managerial Science                                 | 101         | 0.04                  | Kang, Ding & Charoenwong        | 2010 | Journal of Business Research   | 45          | 0.31                  |
| Barroso Castro, La Concha, Dominguez, Gravel & Perifan | 2009 | Corporate Governance: An International Review                | 862         | −0.02                 | Rao, Tilt & Lester              | 2012 | Corporate Governance: The international journal of business in society | 96          | 0.06                  |
| Beiner, Drobetz, Schmid & Zimmermann                   | 2006 | European Financial Management                                | 109         | −0.1247               | Kent & Monem                    | 2008 | Australian Accounting Review   | 72          | −0.01                 |
| Ben-Amar, Chang & McIlkenny                            | 2015 | Journal of Business Ethics                                   | 541         | −0.05 to −0.03        | Kiel & Nicholson                | 2003 | Corporate Governance: An International Review                          | 348         | −0.179 to 0.023       |
| Berrone & Gomez-Mejia                                  | 2009 | Academy of Management Journal                                | 2088        | −0.07 to −0.01        | Kilic                           | 2015 | International Journal of Business and Management                       | 130         | −0.089 to 0.017       |
| Bhagat & Bolton  | 2013 | Journal of Financial and Quantitative Analysis               | 6683        | −0.05 to −0.04        | Kiliç & Kuzey                   | 2016 | Gender in Management: An International Journal                         | 745         | −0.018 to 0.058       |

Table A1. Cont.

| Author                              | Year | Journal   | Sample Size | Observed Size Effects | Author                            | Year | Journal                               | Sample Size | Observed Size Effects |
|-------------------------------------|------|---|-------------|-----------------------|-----------------------------------|------|---------------------------------------|-------------|-----------------------|
| Bonn                                | 2004 | Journal of the Australian and New Zealand Academy of Management | 84          | −0.87 to 0.285        | Kim                               | 2013 | International Management Review       | 290         | −0.11                 |
| Bonn, Yoshikawa & Phan              | 2004 | Asian Business & Management                                     | 169         | −0.052 to 0.254       | Kock, Santaló & Diestre           | 2012 | Journal of Management Studies         | 657         | 0.01                  |
| Bonn, Yoshikawa & Phan              | 2004 | Asian Business & Management                                     | 104         | −0.011 to −0.028      | Kouki & Guizani                   | 2015 | International Business Research       | 294         | 0.3                   |
| Boulouta                            | 2013 | Journal of Business Ethics                                      | 820         | 0.0236                | Kyereboah-Coleman & Biekpe        | 2006 | Corporate Ownership and Control       | 176         | −0.008                |
| Brammer, Millington & Pavelin       | 2009 | British Journal of Management                                   | 199         | −0.095                | Lefort & Urzúa                    | 2008 | Journal of Business Research          | 562         | 0.06                  |
| Cai, Keasey, & Short                | 2006 | European Financial Management                                   | 566         | −0.05                 | Li, Zhang & Foo                   | 2013 | Chinese Management Studies            | 613         | 0.01                  |
| Chapple, Kent & Routledge           | 2012 | Working paper (Social Science Research Network)                 | 1182        | −0.01                 | Liao, Luo & Tang                  | 2015 | The British Accounting Review         | 329         | −0.16                 |
| Charles, Redor & Zopounidis         | 2015 | Economics Bulletin  | 1181        | −0.094                | Lim, Matolcsy & Chow              | 2007 | European Accounting Review            | 181         | 0.116                 |
| Chen, Crossland, & Huang            | 2016 | Strategic Management Journal                                    | 13,248      | −0.07 to 0.04         | Liu, Wei y Xie                    | 2014 | Journal of Corporate Finance          | 16964       | 0.128                 |
| Cheung, Connelly, Impaphayom & Zhou | 2007 | Journal of International Financial Management & Accounting      | 168         | 0.027 to 0.043        | Mallin & Michelon                 | 2011 | Accounting and Business Research      | 278         | 0.081                 |
| Cheung, Jiang, Limpaphayom & Lu     | 2010 | European Financial Management                                   | 287         | −0.011 to 0.024       | McGuinness, Vieito & Wang         | 2017 | Journal of Corporate Finance          | 2412        | 0.02                  |
| Choi, Lee & Park                    | 2013 | Corporate Governance: An International Review                   | 2042        | −0.07 to 0.03         | Mohammadi, Basir & Löö            | 2015 | CESIS Electronic Working Paper Series | 55769       | −0.09                 |
| Combs, Ketchen, Perryman & Donahue  | 2007 | Journal of Management Studies                                   | 73          | 0.00                  | Mori, Golesorkhi, Randøy & Hermes | 2015 | Strategic Change                      | 228         | −0.025                |
| Cormier, Ledoux & Magnan            | 2011 | Management Decision   | 137         | −0.1                  | Musteen, Datta & Kemmerer         | 2010 | British Journal of Management         | 324         | −0.00                 |
| Cumming, Leung & Rui                | 2015 | Academy of Management Journal                                   | 1448        | 0.07                  | Nekhili & Gatfaoui                | 2013 | Journal of Business Ethics            | 450         | −0.106 to −0.213      |

Table A1. Cont.

| Author                                      | Year | Journal  | Sample Size | Observed Size Effects | Author  | Year | Journal  | Sample Size | Observed Size Effects |
|---|------|--|-------------|-----------------------|---|------|--|-------------|-----------------------|
| Daghsni, Zouhayer & Mbarek                  | 2016 | Arabian Journal of Business and Management Review                      | 350         | 0.068                 | Nguyen, Locke & Reddley                                     | 2015 | International Review of Economics and Finance                              | 479         | −0.03                 |
| Dang & Nguyen                               | 2016 | Management International   | 284         | −0.144 to −0.136      | Nurhayati, Taylor & Tower                                   | 2015 | Proceedings of the Australasian Conference on Business and Social Sciences | 285         | 0.032                 |
| Darmadi                                     | 2013 | Corporate Governance: The International Journal of Business in Society | 354         | −0.1 to 0.01          | Oh, Chang & Cheng   | 2016 | Journal of Business Ethics   | 1332        | −0.01                 |
| Darmadi & Gunawan                           | 2013 | Managerial Finance   | 101         | 0.046                 | O'Reilly & Main   | 2012 | Working paper (Social Science Research Network)                            | 1796        | 0.04                  |
| David, Bloom & Hillman                      | 2007 | Strategic Management Journal   | 730         | −0.2 to −0.16         | Ouyang  | 2007 | Published PhD dissertation   | 23,209      | −0.039 to 0.122       |
| De Villiers                                 | 2011 | Journal of Management  | 5997        | −0.01 to 0.00         | Ozcan & Ince  | 2016 | International Business Research  | 112         | −0.16 to −0.18        |
| Desender, Aguilera, Crespi & García-cestona | 2013 | Strategic Management Journal   | 242         | −0.13                 | Pahuja & Bhatia   | 2010 | The IUP Journal of Corporate Governance                                    | 50          | −0.036 to 0.031       |
| Dixon-Fowler, Ellstrand & Johnson           | 2017 | Journal of Business Ethics   | 76          | 0.12                  | Pathan & Faff   | 2013 | Journal of Banking & Finance   | 2640        | −0.21 to −0.16        |
| Dobbin & Jung                               | 2011 | North Carolina Law Review  | 3016        | 0.025                 | Pathan, Skully y Wickramanayake                             | 2007 | Asia Pacific Financial Markets   | 64          | 0.075 to 0.1579       |
| Ducassy                                     | 2015 | Research in International Business and Finance                         | 41          | 0.19                  | Peng, Li, Xie & Su  | 2010 | Asia Pacific Journal of Management   | 300         | −0.017                |
| Dunn & Sainty                               | 2009 | International Journal of Managerial Finance                            | 174         | 0.025                 | Peng, Zhang & Li  | 2007 | Management and Organization Review   | 1202        | 0.05                  |
| Fernández, Gómez-Ansón & Fernández-Méndez   | 1998 | Investigaciones Económicas   | 67          | 0.203                 | Prado-Lorenzo, Sánchez, & Gallego-Álvarez                   | 2009 | Revista Española de Financiación y Contabilidad                            | 288         | 0.04                  |
| Fernández-Gago, Cabeza-García & Nieto       | 2016 | Review of Managerial Science   | 145         | 0.014                 | Rodríguez-Fernandez, Fernández-Alonso & Rodríguez-Rodríguez | 2013 | Revista Europea de Dirección y Economía de la Empresa                      | 121         | 0.02 to 0.112         |

Table A1. Cont.

| Author   | Year | Journal  | Sample Size | Observed Size Effects | Author                                     | Year | Journal  | Sample Size | Observed Size Effects |
|--|------|--|-------------|-----------------------|--|------|--|-------------|-----------------------|
| Fidanoski, Mateska & Simeonovski                       | 2014 | Advances in Financial Economics                  | 175         | −0.1 to 0.12          | Rubino, Tenuta & Cambrea                   | 2016 | Journal of Management & Governance               | 1613        | −0.0176               |
| Galbreath  | 2011 | Journal of Management and Organization           | 161         | 0.04 to 0.22          | Rutledge, Karim & Lu                       | 2016 | Journal of Applied Business and Economics        | 470         | 0.038                 |
| Galbreath  | 2016 | Business Strategy and the Environment            | 300         | 0.02                  | Sahin, Basfirinci & Ozsalih                | 2011 | Published PhD dissertation                       | 96          | −0.136 to 0.171       |
| Gallego-Álvarez, García-Sánchez, & Rodríguez-Dominguez | 2010 | Spanish Accounting Review                        | 288         | 0.062                 | Saibaba                                    | 2013 | IUP Journal of Corporate Governance              | 195         | −0.217                |
| García Lara, García Osma & Penalva                     | 2007 | European Accounting Review                       | 193         | 0.08                  | Setia-Atmaja                               | 2009 | Corporate Governance: An International Review    | 0.21        | 0.04 to 0.21          |
| Garcia-Sanchez, Cuadrado-Ballesteros & Sepulveda       | 2014 | Management Decision                              | 686         | 0.015                 | Shaukat, Qiu & Trojanowski                 | 2016 | Journal of Business Ethics                       | 2028        | 0.02                  |
| Giannarakis  | 2014 | Social Responsibility Journal                    | 100         | −0.033 to 0.108       | Stefanelli & Cotugno                       | 2012 | Academy of Banking Studies Journal               | 76          | −0.104                |
| Gregory-Smith, Main & O'Reilly                         | 2014 | The Economic Journal                             | 13,870      | −0.024                | Tang                                       | 2016 | European Management Journal                      | 364         | −0.01 to 0.03         |
| Gul, Srinidhi & Tsui                                   | 2008 | Working paper (Social Science Research Network)  | 2784        | −0.0166 to −0.0031    | Taurigana & Chithambo                      | 2015 | The British Accounting Review                    | 860         | 0.07                  |
| Gulzar & Wang  | 2011 | Accounting and Financial Reporting               | 1011        | −0.02                 | Triana, Miller & Trzebiatowski             | 2013 | Organization Science                             | 462         | −0.02                 |
| Gupta, Lam, Sami & Zhou                                | 2015 | Working paper (Social Science Research Network)  | 1153        | 0.02                  | Uadiale                                    | 2010 | International Journal of Business and Management | 30          | 0.075 to 0.75         |
| Hafsi & Turgut   | 2013 | Journal of Business Ethics                       | 95          | −0.01                 | Alix Valenti, Luce & Mayfield              | 2011 | Management Research Review                       | 87          | −0.28                 |
| Hahn & Lasfer  | 2007 | Cass Business School Research Paper              | 764         | 0.012 to 0.022        | Villanueva-Villar, Rivo-López & Lago-Peñas | 2016 | Business Research Quarterly                      | 438         | 0.083                 |
| Haque  | 2017 | The British Accounting Review                    | 363         | −0.04 to −0.01        | Vo & Nguyen                                | 2014 | International Journal of Economics and Finance   | 752         | −0.06 to 0            |
| Hogan, Olson & Sharma                                  | 2014 | Journal of Leadership, Accountability and Ethics | 540         | 0.11                  | Walls & Berrone                            | 2015 | Journal of Business Ethics                       | 1320        | 0.08                  |

Table A1. Cont.

| Author                 | Year | Journal  | Sample Size | Observed Size Effects | Author                                    | Year | Journal  | Sample Size | Observed Size Effects |
|------------------------|------|--|-------------|-----------------------|---|------|--|-------------|-----------------------|
| Hoje & Harjoto         | 2011 | Journal of Business Ethics                       | 13,389      | −0.04 to 0.01         | Walls & Hoffman                           | 2013 | Journal of Organizational Behavior                                     | 1881        | −0.18                 |
| Honeine & Swan         | 2011 | Working paper (Social Science Research Network)  | 1374        | −0.14 to 0.04         | Walls, Berrone & Phan                     | 2012 | Strategic Management Journal   | 2002        | −0.01                 |
| Horner & Valenti       | 2012 | Journal of Leadership, Accountability and Ethics | 238         | −0.01                 | Wang, Wang, Zhang & Yang                  | 2012 | African Journal of Business Management                                 | 446         | 0.007                 |
| Horvath & Spirollari   | 2012 | Prague economic papers                           | 680         | 0.028                 | Zemzem & Kacemb                           | 2014 | International Journal of Finance & Banking Studies                     | 170         | 0.18                  |
| Hu, Tam & Tan          | 2010 | Asia Pacific Journal of Management               | 304         | 0.03 to 0.07          | Zhang                                     | 2012 | Corporate Governance: The international journal of business in society | 475         | −0.03 to −0.02        |
| Huang                  | 2010 | Journal of Management and Organization           | 297         | 0.174                 | Zhang, Zhu & Ding                         | 2013 | Journal of Business Ethics   | 516         | −0.01                 |
| Hussain, Rigoni & Orij | 2016 | Journal of Business Ethics                       | 152         | 0.037                 | Zorn, Shropshire, Martin, Combs & Ketchen | 2017 | Strategic Management Journal   | 3124        | 0.03 to 0.04          |

This table shows the main details of the papers included in the final sample of the meta-analysis.

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