

# Is 'Excess' Board Independence Good for Firm Performance? An Empirical Investigation of Non-financial Listed Firms in Saudi Arabia

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## Abstract

We investigate the relationship between board independence and firm performance. We hypothesize that while the presence of independent directors helps improve firm performance, excess independent directors on the board will not contribute to firm performance. We test our hypotheses on data drawn from non-financial firms listed on Saudi Arabian stock exchange applying panel data regression with fixed effects model. We find that board independence, ratio of independent directors to board size, has a positive link with firm performance while excess board independence, defined as a dummy variable measuring the number of independent directors in excess of regulatory minimum, is found to have no statistically significant relationship with firm performance. Our findings have important implications for the management of listed firms as more than 50% of the firm-year observations from 6 out of 11 sectors studied have excess board independence. We conclude that in order to enjoy the benefits of the presence of independent directors on the board, the firm should keep it at the regulatory minimum.

**Keywords:** board independence, firm performance, agency theory, stewardship theory

The role played by board composition as an integral part of corporate governance mechanism cannot be over emphasized. Board composition impacts the extent and effectiveness of the directors' negotiating power to mitigate the agency problem and align the top management efforts along shareholders' interests. Berle and Means (1932) argue that the management of the firm has a tendency to implement sub-optimal decisions arising out of problems of adverse selection and moral hazard. This agency cost may diminish the firm value and adversely affect the value maximization goal of the capital providers. (Jensen and Meckling, 1976) Agency problem can be effectively countered by an appropriate corporate governance mechanism. (McColgan, 2001) The role played by the board is bought out by many of the earlier works. Brennan (2006) argues that the board of directors is the key to the corporate governance system. Johnson (2005) emphasizes that the board is vested with the duty of overseeing and controlling the top management. Zahra and Pearce (1989) show that the functioning of board can help improve firm performance. Expertise of the board can carry out the role of whistle blowers, should they find a reason. (Salmon, 1993)

Board composition is described by two components namely board independence and board size. The ability of the board to effectively monitor the top management and to mitigate the agency problems is greatly dependent on the board independence as the outside directors have absolutely no stake in the firm. According to Fernandes (2005), the firms that has at its helm a board that is composed of a higher representation of outside directors is bound to suffer less from agency problems. The firm may enjoy an improved linkage between the interests of management and the shareholders. Hence, board independence may enhance firm performance.

This work evaluates the association between board independence and firm performance. Two reasons explain the importance of this research. First, though the literature that examines the relationship between board independence and firm performance is abundant, the studies that are carried out in the context of Saudi Arabia are very few. Besides, the empirical works that have investigated the relationship between board independence and firm performance have produced mixed results in Saudi Arabia as is the case elsewhere. (See for example, Al-Matari et al.

2012, Ghabayen, 2012) Hence, this work is to produce a conclusive evidence and end this confusion. Second, all the existing research works define board independence as the ratio of independent directors to the total number of directors on the board. In addition to this measure, we also employ an alternative definition for board independence which defined excess independence by which we evaluate if the firm that has appointed board independence in excess of regulatory minimum contribute to firm financial performance.

We organize this paper in sections. The first section presents the theoretical background of the study and develops the hypotheses studied. Section 2 reviews the related earlier research carried out in the context of Saudi Arabia. Section 3 presents the corporate governance regulations in Saudi Arabia. Section 4 gives the details of the sample studied and provides the definition of the variables used in this work. Section 5 describes the empirical results and results of robustness tests. The final section, section 6, concludes the study.

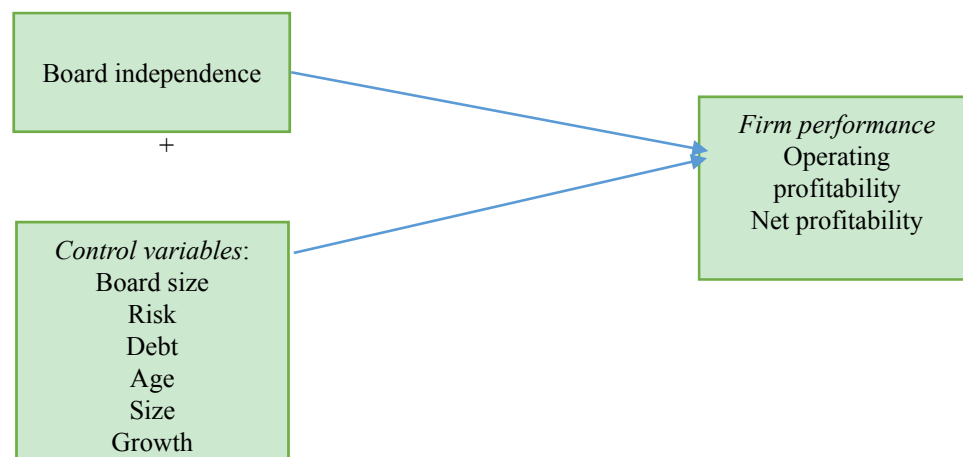
### 1. Theoretical Background and Hypotheses Development

Board independence and firm performance is examined within the broad framework of two theories namely agency theory and stewardship theory. (Nicholson & Kiel, 2007) Agency theory revolves around the concept of separation of ownership and control which can result in varied goals for the owners and shareholders. Independent directors on the board can effectively carry out the function of checking out on the top management and align their goals with those of the providers of capital as they have absolutely no stake in the firm. Thus, they help reduce agency problems. This can contribute to the firm performance. This suggests a positive link between ratio of independent directors and firm performance. (Fama, 1980; Krivogorsky, 2006)

H1: Board independence has a positive link with firm performance

Stewardship theory disagrees with the assumption that the separation of ownership and control results in managers setting self-styled goals in contrast to those of the owners. The theory argues that the managers are also guided by the pressure to perform and be successful in their job. (Donaldson & Davis, 1991) They are compelled to act as good stewards of the firm's resources in order to be successful in achieving their goals. The assumption that the independent directors have to closely monitor the managers and control their deviations from the pursuit of ownership goals is not valid. Besides, independent directors may not be equipped with the requisite expertise and time to perform their function diligently. According to Muth and Donaldson (1998), the independent directors may not endow the management with sufficient freedom which may result in a decline in firm performance. The controversy over the contribution of independent directors on the board lies at the core of the difference in the perspectives of the agency theory and stewardship theory on the role of independent directors on the board. We argue that while the benefits drawn from the presence of independent directors on the board cannot be completely refuted, they may actually enhance performance of the firm. However, if they crowd out the internal and executive directors who have stakes in the firm, they may not contribute to firm performance. Hence, we hypothesize

H2: Excess board independence will not contribute to firm performance



Conceptual framework

## 2. Previous Studies

Earlier works that evaluate the relationship between board independence and firm performance are abundant in literature. However, many of these studies are carried out in developed countries and other emerging countries. Studies on firms from Saudi Arabia are very few. This section reviews the research works carried out on data from Saudi Arabian firms carried out subsequent to the amendment of corporate governance regulations in 2010.

Fallatah and Dickins (2012) examine the association between corporate governance index that includes nine corporate governance characteristics and firm performance and firm value for a sample of listed firms. The corporate governance characteristics included are board size, CEO duality, board independence, presence of audit, nomination and remuneration committees comprising of only independent directors, presence of policies relating to insider, board and executive stock ownership. They show that corporate governance and return on assets are not related while it is positively associated with firm value.

Ghabayen (2012) investigates the link between audit committee size, audit committee composition, board size and board composition with firm performance. The conclusions of the study are based on analysis of data relating to 2011 for a sample of 102 non-financial listed companies. They show that audit committee size, audit committee composition and board size do not impact firm performance. They show increase in the proportion of independent directors on the board has a negative impact on firm performance.

Al-Matari et al. (2012) analyses the connection between corporate governance tools namely audit committee size, audit committee independence, audit committee meetings, board composition and board size with the financial performance of non-financial listed companies in 2010. They find that none of the board characteristics and audit committee characteristics other than audit committee size influences firm performance. Firm performance is found to decline when the audit committee gets larger.

Alhassan et al. (2015) evaluate the relationship of three corporate governance variables, board size, board composition and board meeting with firm performance in case of 10 listed banks on the Saudi Arabian stock market based on data for the period, 2007-2012. They show an insignificant positive relationship between board size and firm performance. The association between board composition and firm performance also emerges insignificant. However, they find a significant relationship between board meetings and firm performance which is positive.

Fallatah (2015) scrutinizes if board size, board independence, stock ownership by government and large shareholders and CEO duality affects the determination of CEO compensation and if CEO compensation is related to firm performance. The study is based on data for the period, 2008-2012 relating to all the listed companies on Saudi Arabian stock market. The research shows that higher CEO compensation results in improved firm performance and the CEO compensation is negatively associated with board independence.

As is evident from this section, the research that relates board independence and firm performance are very few in the context of Saudi Arabia and have produced mixed results. The purpose of this research is to add to the scanty literature in Saudi Arabia in this domain and try and help clarify the relationship between these two variables. Additionally, this paper tests the link between board independence in excess of the regulatory minimum and firm performance.

## 3. Corporate Governance Regulations on Board Independence in Saudi Arabia

Corporate governance regulations in the country were originally established in 2006 and were subsequently amended in 2010. The regulations are organized in five major parts: preliminary provisions, shareholders rights and the general assembly, requirements on the listed companies disclosure and transparency, board of directors' issues and the closing provisions. Capital market law offers the definitions of the terms adopted by the Capital market authority for the purposes of implementation of the corporate governance regulations. An independent member on the board is defined as one who fulfills the following conditions.

- 1) He/She does not hold a five per cent or more of the issued shares of the company or any of its group.
- 2) He/She is not a representative of a legal person who holds a five per cent or more of the issued shares of the company or any of its group.
- 3) He/She, during the preceding two years, has not been a senior executive of the company or any other company within that company's group.
- 4) He/She is not a first degree relative of any board member of the company or of any other company within that company's group.

- 5) He/She is not first degree relative of any of senior executives of the company or of any other company within that company's group.
- 6) He/She is not a board member of any company within the group of the company which he is nominated to be a member of its board.
- 7) He/She has not been an employee with an affiliate of the company or an affiliate of any company of its group, such as external auditors or main suppliers or he/she, during the preceding two years, had no controlling interest in any such party.

The regulations stipulate that the articles of association of the company shall specify the board size subject to the condition that it shall have no less than 3 and no more than 11 members on the board. The independent members on the board shall not be less than two or one-third of the board size whichever is greater.

#### 4. Sample

We study all the firms that are listed in Saudi Arabian stock exchange that belong to non-financial sectors for which data is available for the study variables during the study period, 2010-2014. The sample comprises of 365 firm-year observations drawn from 11 sectors namely, agriculture, cement, communication, construction, energy, hotel & tourism, media, petrochemicals, real estate, retail and transportation.

Table 1. Sample distribution

| Sector          | Firm-year observations |
|-----------------|------------------------|
| Agriculture     | 65                     |
| Cement          | 35                     |
| Communication   | 15                     |
| Construction    | 65                     |
| Energy          | 10                     |
| Hotel & Tourism | 10                     |
| Media           | 10                     |
| Petrochemicals  | 70                     |
| Real estate     | 25                     |
| Retail          | 40                     |
| Transportation  | 20                     |
| Total           | 365                    |

#### 4.1 Variables Definition

The study applies the following definitions for the variables included in the analysis. The variables that are included for this study are drawn from earlier works.

Operating profit (OP): Operating profit divided by total assets

Net profit (NP): Net profit divided by total assets

Board size (BRD): Total number of directors on the board in logarithmic form

Board independence (IND): Number of independent directors divided by total board size

Excess independence (INDD): A dummy variable which is assigned the value 1 when the number of independent directors on the board is more than regulatory minimum and zero otherwise

Risk (RISK): Standard deviation of the previous 3 years' operating profit

Debt (DEBT): Total liabilities divided by total assets

Age (AGE): Difference between the year of study and year of firm incorporation in logarithmic form

Growth (GR): Year on year growth rate of sales

The correlation matrix is provided in Table 2.

Table 2. Pearson correlation matrix

|      | OP      | NP      | IND     | INDD    | BRD    | RISK    | DEBT    | AGE     | SIZE   | GR |
|------|---------|---------|---------|---------|--------|---------|---------|---------|--------|----|
| OP   | 1       |         |         |         |        |         |         |         |        |    |
| NP   | .906**  | 1       |         |         |        |         |         |         |        |    |
| IND  | -.088   | -.019   | 1       |         |        |         |         |         |        |    |
| INDD | -.094   | -.047   | .794**  | 1       |        |         |         |         |        |    |
| BRD  | .138**  | .107*   | -.215** | -.044   | 1      |         |         |         |        |    |
| RISK | .026    | -.009   | -.242** | -.196** | .131*  | 1       |         |         |        |    |
| DEBT | -.212** | -.287** | -.233** | -.188** | .104*  | .256**  | 1       |         |        |    |
| AGE  | .200**  | .233**  | .050    | .062    | -.115* | -.257** | -.340** | 1       |        |    |
| SIZE | -.021   | -.085   | -.406** | -.286** | .421** | .594**  | .517**  | -.359** | 1      |    |
| GR   | -.049   | -.063   | -.111*  | -.130*  | -.006  | .168**  | .183**  | -.179** | .173** | 1  |

\*\* Correlation is significant at 0.01 level (2-tailed)

\* Correlation is significant at 0.05 level (2-tailed)

Descriptive statistics can be found in Table 3.

Table 3. Descriptive statistics

| Variables              | N   | Minimum    | Maximum     | Mean       | Standard deviation |
|------------------------|-----|------------|-------------|------------|--------------------|
| Operating income       | 365 | -488,886   | 60,653,705  | 1,855,581  | 6,893,275          |
| Net income             | 365 | -2,358,000 | 29,241,750  | 844,931    | 3,151,451          |
| Independent directors  | 365 | 2          | 11          | 4          | 1                  |
| Board size             | 365 | 4          | 11          | 8          | 1                  |
| Total assets in '000   | 365 | 53,487     | 340,041,079 | 16,155,757 | 49,606,256         |
| Total liabilities '000 | 365 | 4,358      | 258,665,697 | 9,334,004  | 30,942,976         |
| Sales '000             | 361 | 14,885     | 857,875,000 | 9,266,724  | 50,387,170         |

## 5. Empirical Results

The empirical results are presented in this section. We applied panel data regression with fixed effects as suggested by Hausman test results. We apply models 1 and 2.

$$OP = f(IND, BRD, RISK, DEBT, AGE, SIZE, GR) \quad (1)$$

$$OP = f(INDD, BRD, RISK, DEBT, AGE, SIZE, GR) \quad (2)$$

For robustness check, we apply the models 3 and 4.

$$NP = f(IND, BRD, RISK, DEBT, AGE, SIZE, GR) \quad (3)$$

$$NP = f(INDD, BRD, RISK, DEBT, AGE, SIZE, GR) \quad (4)$$

Both our hypotheses are validated by the results of our analysis of data. We find a positive link between the board independence when measured as the ratio of independent directors on the board and firm performance. However,

when we defined excess independence as a dummy variable measuring the board independence in excess of regulatory minimum, we find the variable becomes insignificant. Firm size and firm age are the control variables that emerge significant in the analysis. Larger firms have inferior performance while older firms have better performance. The other control variables, risk, level of debt employed and growth are not found to be significant.

Table 4. Panel regression results with operating income as dependent variable

| Independent variables | Model 1                 | Model 2                 |
|-----------------------|-------------------------|-------------------------|
| Intercept             | 4.8370**<br>(10.2239)   | 5.0969<br>(11.0672)     |
| IND                   | 0.1720**<br>(2.4487)    |                         |
| INDD                  |                         | 0.0144<br>(0.7327)      |
| BRD                   | 0.3389<br>(1.4819)      | 0.2315<br>(1.1109)      |
| RISK                  | 1.20E-05<br>(0.5680)    | 7.46E-06<br>(0.3507)    |
| DEBT                  | 0.0200<br>(1.0923)      | 0.0237<br>(1.2816)      |
| AGE                   | 0.4876**<br>(3.6191)    | 0.4812**<br>(3.5099)    |
| SIZE                  | -0.9070**<br>(-13.0633) | -0.9206**<br>(-13.1944) |
| GR                    | 0.0070<br>(0.7657)      | 0.0071<br>(0.7712)      |
| R-square              | 0.7163                  | 0.7082                  |
| Adjusted R-squared    | 0.6256                  | 0.6160                  |
| F-statistic           | 7.8973**                | 7.6847**                |

\*\* Significant at 1% level

t-statistic is in parenthesis

Dependent variable: OP

### 5.1 Robustness Tests

As the association between board independence and firm performance can vary according to the choice of firm performance measure used (Krivogorsky, 2006), we test the robustness of our results by an alternate firm performance measure by substituting operating income by net income as a ratio to total assets. We find our results are robust in respect of all the variables. Board independence and excess independence continue to share a positive association and an insignificant association with firm performance respectively. The results remain unchanged even in respect of the control variables included in the study. All control variables excepting firm size and firm age remain insignificant. The direction of linkage of firm size and firm age with firm performance remain unaffected by the alternating the firm performance measure.

Table 5. Panel regression results with net income as dependent variable

| Independent variables | Model 3                 | Model 4                 |
|-----------------------|-------------------------|-------------------------|
| Intercept             | 3.1099**<br>(8.2491)    | 3.4117**<br>(9.1747)    |
| IND                   | 0.2020**<br>(3.5879)    |                         |
| INDD                  |                         | 0.0152<br>(0.9527)      |
| BRD                   | 0.2451<br>(1.3514)      | 0.1386<br>(0.8241)      |
| RISK                  | 1.21E-05<br>(0.7150)    | 6.90E-06<br>(0.4003)    |
| DEBT                  | 0.0123<br>(0.8410)      | 0.0168<br>(1.1250)      |
| AGE                   | 0.3786**<br>(3.5160)    | 0.3772**<br>(3.4080)    |
| SIZE                  | -0.6086**<br>(-10.9612) | -0.6274**<br>(-11.1182) |
| GR                    | 0.0054<br>(0.7342)      | 0.0054<br>(0.7246)      |
| R-square              | 0.7285                  | 0.7156                  |
| Adjusted R-squared    | 0.6431                  | 0.6272                  |
| F-statistic           | 8.5308**                | 8.0961                  |

\*\* Significant at 1% level

t-statistic is in parenthesis

Dependent variable: NP

## 6. Conclusion

We test the link between board independence and firm performance applying two varied measures of board independence as drawn from agency theory and stewardship theory. Agency theory suggests that external directors who are free from any stake in the firm are in a better position to closely monitor the top management and align their goals in line with the shareholders' interests. We find a positive link between board independence and firm performance when it is measured as the ratio of independent directors to board size. However, stewardship theory argues that the independent directors may not contribute firm performance because they may not endow the top management with the requisite freedom to pursue the organizational goals. Besides, the independent directors may not be well equipped with the required expertise and specialized knowledge specific to the firm to provide the strategic direction. Close supervision of top management in any way is not required as they are motivated by their self-interests like the need to achieve and the need to be successful. They tend to act as good stewards of organizational resources in order to pursue their goals. Pursuit of the managers' goals will automatically lead to shareholders wealth maximization. If independent directors dominate the board and crowd out the internal and executive directors from the board, their presence may not contribute to enhanced firm performance. We tested two hypotheses namely board independence will have a positive influence on firm performance if it is at the minimum. However, excess representation of independent directors on the board may not contribute to firm performance. We have found that board independence has a positive relationship with firm performance but excess independence of the board has no association with firm performance.

This is an important finding for the firms' management. Corporate governance regulations in Saudi Arabia stipulates that the total number of directors on the firm's board shall not be less than 3 and not more than 11. The independent directors on the board shall be one-third of the board size subject to a minimum of 2. As many as 184 out of 365 firm-year observations studied by us have board independence in excess of regulatory minimum. This is about 50% of the sample.

Table 6. Firm-year observations with board independence in excess of regulatory minimum

| Sector          | Firm-year observations | Firm-year observations with 'excess' independence | Firm-year observations with 'excess' board independence as a percentage of the total |
|-----------------|------------------------|---|--|
| Agriculture     | 65                     | 44  | 67.69  |
| Cement          | 35                     | 22  | 62.86  |
| Communication   | 15                     | 6   | 40.00  |
| Construction    | 65                     | 19  | 29.23  |
| Energy          | 10                     | 3   | 30.00  |
| Hotel & Tourism | 10                     | 7   | 70.00  |
| Media           | 10                     | 7   | 70.00  |
| Petrochemicals  | 70                     | 29  | 41.43  |
| Real estate     | 25                     | 15  | 60.00  |
| Retail          | 40                     | 23  | 57.50  |
| Transportation  | 20                     | 9   | 45.00  |
| Total           | 365                    | 184   | 50.41  |

It can be seen from Table 6 that more than 50 per cent of firm-year observations from 6 out of the 11 sectors studied namely agriculture, cement, hotel & tourism, media, real estate and retail have 'excess' independent directors. Given the finding that excess board independence does not contribute to the firm performance, it may be advisable for the firms to implement the corporate governance regulations stipulation and enjoy a positive effect of board independence.

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