# THE EFFECT OF CORPORATE GOVERNANCE MECHANISMS ON FINANCIAL PERFORMANCE IN THE ARAB CONTEXTS: A META-ANALYSIS

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**ABSTRACT:** The thrust behind embarking on the present study is to investigate the effect of corporate governance mechanisms on financial performance, with a particular focus on board of directors' characteristics; namely board size, board meetings, chief executive officer (CEO) duality and board independence, and return on assets (ROA) and return on equity (ROE) as proxies for financial performance. Using a meta-analysis method, this study of 18 research papers, which were published between 2013 and 2017, is concerned about the listed and non listed companies in the Arab contexts. The research's findings showed positive significant effects of all independent variables included in this study on the financial performance indicators; thus, the results were in line with the main corporate governance theories, especially agency theory and resource dependence theory. More specific, the results indicated that listed companies' performances were more affected by board characteristics than non listed companies.

**Keywords:** corporate governance, board of directors, Arab contexts, financial performance, meta-analysis.

JEL Classification: G30, C20, E60

### **1. INTRODUCTION**

Over the last two decades and due to financial crises, scandals and dysfunctions in various economies and businesses, the corporate governance concept has been having the share from scholars around the world. In this side, many national and international agencies and institutions have formulated reports and recommendations to improve governance systems in both public and private organizations (Cadbury, OECD...).

The origin of this concept can be found in the works of Berls & Means (1932) about the agency relationship and the works of Jensen & Meckling (1976) about the agency theory. Theoretically speaking, the separation of ownership and control of company — where instead of managing the company by its shareholders themselves, they hire directors

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to take the responsibility in a manner consistent with their interests-- leads to conflicts between shareholders and managers; deeply, giving managers the opportunity to run the business means giving them the opportunity to use the companies' resources for their own interests.

The existence of opportunistic behaviour and diverging interests and the asymmetrical information between managers and shareholders are considered as the main causes of the conflicts of interests. Therefore, to control these conflicts and reduce agency costs between the two, various internal and external mechanisms, known as "corporate governance", have been proposed. On the basis of that, OECD has defined the notion of corporate governance as follows: "The system by which business corporations are directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation (...) and spells out the rules and procedure for making decisions on corporate affairs" (Dessain & al, 2008, p. 66). Hence, the existence of such conflicts of interests between managers and shareholders may affect the quality of company results and, consequently, its financial performance. However, a good governance system would eliminate or at least reduce those conflicts.

The study under scrutiny is intended to answer the following main question: "is there a significant effect of corporate governance mechanisms on financial performance in the Arab contexts?"

According to the importance of board of directors in any corporate governance system, the research will focus on studying the effect of the board of directors' characteristics: size, composition, number of meeting and CEO duality, on the financial performance. To do so, the study sheds light on the Arab contexts and bases on meta-analysis, as a statistical method used in what they called "research integration", to test its hypotheses.

An ultimate upshot of the study's purport is the inevitable quest to answer the following questions and to provide a clear answer for the main question:

**a.** Is there a significant effect of board size on financial performance in the Arab contexts?

**b.** Is there a significant effect of board independence on financial performance in the Arab contexts?

**c.** Is there a significant effect of board meetings on financial performance in the Arab contexts?

**d.** Is there a significant effect of CEO duality on financial performance in the Arab contexts?

To answer these questions, the study will be structured into four parts. The following part will be summarized the theoretical background of the relationship between the board of directors' characteristics and the financial performance; based on this framework, the research hypotheses will be developed. The third part will present the research methodology, where the study instrument and the dataset will be described, and will examine the research hypotheses. By the conclusion, the study will be over.

### **2.** BACKGROUND AND HYPOTHESES

The board of directors is among the crucial mechanisms in corporate governance system. Through the ability of controlling and managing at the same time, this mechanism can limit the opportunism of managers which leads to improve the financial performance of companies. Theoretically and empirically, a number of studies have given the board of directors and its characteristics a great attention, particularly by studying their effect on the financial performance.

#### 2.1. Board size:

From a theoretical viewpoint, agency theorists argue that the board of directors with large size affects negatively the financial performance due to the poor communication and lack of coordination among directors. Hence, the difficulty of reaching a consensus between them leads to conflicts of interests. On the other hand, a small board allows controlling the managers effectively and giving chance for all of them to express their opinions (Louizi, 2011, p. 84).

Other way around, resource dependence theorists insist on the positive effect of a large board on the financial performance. According to them, the board is among the most important ways to create links and open the doors with the outside world that help to reduce the impact of environmental uncertainty. More the managers require information which are numerous and difficult to obtain more the uncertainty is reduced; in this case, due to the directors relations with the environment, their experiences, and their scientific knowledge, which make access to information more possible, the large board has the opportunity to make the information available and favourable (Bikourane & Avelé, 2014, p. 81). Starting from these two viewpoints, the first hypothesis is formulated as follows:

H1: Board size has a significant effect on financial performance in the Arab contexts.

### 2.2. Board independence:

From a theoretical perspective, the agency theory emphasizes on the importance of board independence. According to this theory, because of his independence, the external director can faithfully fulfill the control functions necessary to limit the opportunities of managers and easily expel ineffective managers; for this reason, the agency theorists confirm the positive relationship between independence and financial performance. However, some researchers show that the problem of board independence mechanism is the lack of knowledge about the real situation of the company by the external members; in other words, the company can bear the costs of miscommunication, coordination and decision, and consequently, a decrease in performance (Bikourane & Avelé, 2014, p. 82); (Wanyonyi & Olweny, 2013, p. 100). In accordance with the mentioned above, the second hypothesis is:

*H2:* Board independence has a significant effect on financial performance in the Arab contexts.

### 2.3. Board meetings:

According to Louizi, some studies highlight that the board which organizes meetings frequently has a positive impact on the financial performance because it provides more time for directors to perform their tasks properly (2011, p. 86), in one hand. In the other hand,

some studies, for instance the study of Johl & al. (2015), show that the more directors meet the more financial performance decrease because of meeting costs: travel costs, charges, and attendance fees. Moreover, researchers like Velnampy (2013) do not find a correlation between the number of board meetings and financial performance simply because the time available to directors would be wasted in routine tasks and not in the purpose of controlling managers. Depending on these opinions, the third hypothesis came to be:

*H3:* Board meetings have a significant effect on financial performance in the Arab contexts.

### 2.4. Duality of CEO:

The choice between the form of one board (board of directors) and two boards (board of directors and supervisory board) was the subject of certain number of studies. The researchers have found that the reason for choosing between the two forms depends primarily on business-related determinants such as the type of activity (Bikourane & Avelé, 2014, p. 80).

From a theoretical point of view, the separation between decision-making and control, which means the existence of a board of directors and a supervisory board, is very necessary to limit the opportunities for managers, and consequently to improve the performance according to agency theory. On the contrary, the theory of stewardship confirms that good performance depends on the existence of a single leader when determining and applying a strategy, in other words the existence of a board of directors with the absence of the separation between decision-making and control. This theory also confirms that the presence of a supervisory board means that the company supports two types of agency costs: the first concerns the monitoring of the behavior of the board of directors' chairman, while the second concerns the transfer of information from the board of directors to the supervisory board (Bikourane & Avelé, 2014, pp. 79, 80). The overview mentioned above about the separation between the two boards makes the CEO duality clearer; the separation between the CEO and the board of directors' chairman means the separation between the leader and the controller. Based on the opinions mentioned above, the last hypothesis is as follows:

*H4:* Duality of CEO has a significant effect on financial performance in the Arab contexts.

### **3.** METHODOLOGY, RESULTS AND DISCUSSION

### 3.1. Methodology and dataset:

As Ortas & al. have noticed in their work, meta-analysis gives the researchers the possible to summarize, simplify and precise previous conflicts findings of various studies on a specific topic (2017, p. 11). In this case, using meta-analysis makes the effect of board characteristics on financial performance more comprehensive due to the accumulation and analysis of several research works' results. Different methods are used under the title of meta-analyses for instance random effect and fixed effect; this study follows the same meta-analysis methodology used by Abdul-Hamid & al. (2014) based on the work of Hunter & al. (1982), where the correlation coefficient, or more specific the effect size (r), was considered as the main statistical term, to compute the effect of board characteristics on financial performance in the Arab contexts.

According to Abdul-Hamid & al. based on the work of Hunter & al. (1982), six steps are necessary to carry on with meta-analysis (2014, pp. 52, 53):

- The first step is about the transformation of any statistical indicator to effect size (r). If the previous study based on (z), the formula used in order to transform it to (r) is:

$$r = z/\sqrt{N}$$

While, if the study based on (*t*), the formula used to get the effect size (*r*) is:  $r = \sqrt{t^2}$ 

 $\sqrt{(t^2+d_f)}$ 

Where  $d_f$  is the degree of freedom.

- The second step is to calculate the mean correlation ( $\bar{r}$ ) as follows:

 $\bar{r} = \frac{\sum(N_i r_i)}{\sum N_i}$ 

Where  $N_i$  is the sample size for study *i*.

- The third and the fourth stages are about the calculation of the observed variance  $(S_r^2)$  and the estimation of sampling error variance  $(S_e^2)$  respectively as follows:

$$S_r^2 = \frac{\sum [N_i(r_i - \bar{r})^2]}{\sum N_i}$$
$$S_e^2 = \frac{(1 - \bar{r}^2)^2 K}{\sum N_i}$$

Where K is the number of previous studies included in the meta-analysis.

- finding the unbiased estimate of population variance  $(S_p^2)$  is The fifth stage. The formula is given as follows:

$$S_p^2 = S_r^2 - S_e^2$$

- By the estimation of the model's statistical validity  $(X^2)$ , the steps will be over. The formula for this estimation is:

$$X_{K-1}^2 = K \frac{S_r^2}{S_e^2} = \frac{NS_r^2}{(1 - \bar{r}^2)^2}$$

The sample of this research was constructed by searching for articles that investigate the effect of corporate governance on financial performance in the Arab contexts. Hence, *governance*, *performance* and *Arab countries* are used as keywords, which should be included in the papers' abstracts, to search for papers in different databases. Because of the lack of studies concerning the Arab contexts, any study will be accepted without looking for the ranking of its scientific journal.

The selection of studies is based on four main criteria:

- The paper should study one of the Arab contexts; in this case, all the studies that interested by more than one country will be excluded.

- The corporate governance should be evaluated by using quantitative variables, in other words, any study based on qualitative methods, indices and review will not be included.

- The financial performance should be evaluated using accounting-based indicators which are return on equity (ROE) and return on assets (ROA). However, the papers based on market-based indicators will be excluded, just because not all the Arab stock exchanges are active.

- To apply meta-analysis fluently, the effect of corporate governance variables on financial performance measures should be tested through effect size (r) or (t) value (one of them should be mentioned in the study).

After the quick reading of the abstracts and statistical tables, 27 previous studies were excluded, leaving us with the results of 18 papers to be analyzed and consolidated to test the research hypotheses, one of them is a PhD thesis. All the studies were published between 2013 and 2017 (After the international financial crises 2008). The basic characteristics of the studies included in this analysis are detailed in Table 1.

Researchers	Date	Sample	Country	
Amba (2013)	2010-2012	39 companies listed on BSE	Bahrain	
Al-Sultan & Al-Shammari (2009)	2004-2007	66 non-financial companies listed on KSE	Kuwait	
Mousa & Desoky (2012)	2008-2010	43 Listed companies on BSE	Bahrain	
Tomar & Bino (2012)	1997-2006	14 banks listed on ASE	Jordan	
Najjar (2012)	2005-2010	5 insurance companies listed on BSE	Bahrain	
Al-Saidi & Al-Shammari (2013)	2006-2010	9 banks listed on KSE	Kuwait	
Mohamed & al. (2013)	2010	88 non-financial listed companies on ESE	Egypt	
Zedan & Abu Nassar (2014)	2005-2009	69 industrial companies listed on ASE	Jordan	
El-Chaarani (2014)	2006-2010	20 banks	Lebanon	
Marashdeh (2014)	2000-2010	115 listed companies on ASE	Jordan	
Al-Matari & al. (2014)	2011, 2012	81 listed companies on MSM	Oman	
Emile & al. (2014)	2004-2010	30 from the top 50 active companies listed on ESE	Egypt	
Ahmed & Hamdan (2015)	2007-2011	42 financial companies listed on BSE	Bahrain	
Chenini & Jarboui (2016)	2000-2001	8 banks listed on TSE	Tunisia	
H.Ben Mbarek & K.Ben Mbarek (2016)	2004-2014	11 traded banks	Tunisia	
Buallay & al. (2017)	2012-2014	171 companies listed in Tadawul SE	KSA	
Abobakr (2017)	2006-2014	25 banks	Egypt	
Farhan & al. (2017)	2010-2013	72 listed companies Abu Dhabi Securities Market and Dubai Financial Market.	UAE	

Table N° 1:	Sample
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Source: Created by authors.

83.33% of the studies were about listed companies, in some cases about non-listed companies (16.67%), this is depends on the countries and their stock exchanges; in this side, 9 of the studies were about Gulf countries. In most studies (61.11%) there was distinguish between financial (44.44%) and non-financial companies (16.67%), in (38.89%) studies left there was no specific kind of company. Thus, this research subcategorizes the research papers depending on *listed on stock exchange* characteristic where two subgroups will be created, listed companies subgroup and non-listed companies subgroup. Because of lack of sufficient number of studies to be divided in three categories, the kind of the company (financial, non-financial and non specific kind) will not be taken in consideration.

### 3.2. Results and discussion:

As previously discussed, this research will be examined the effect of corporate governance mechanisms on financial performance using meta-analysis method based on 18 empirical studies concerned by the Arab contexts. The main variables in this study and how they were measured in the different research papers included in this study are as follows:

a) Independent variables: the board characteristics were:

- Size (BS): total number of directors in the board.

- Independence/composition (BC): the percentage of independent and non-executive directors to board size.

- Board meeting (BM): the number of board meetings per year.

- **CEO duality (DU):** dichotomous with "1" or "0" depending on the cumulating between the chairman and the CEO posts.

b) Dependant variables: the financial performance was measured by using:

- Return on assets (ROA): Earnings divided by total assets of the company.

- **Return on Equity (ROE):** Earnings divided by total equity of the company.

Some studies used more proxies for both dependant and independent variables, in addition to the control variables. The degree of freedom for  $X^2$  test will be calculated based on the number of previous studies included in the meta-analysis.

The board size was mostly included in the research papers as independent variable (94.44%), 10 studies tested the effect of this variable on both ROA and ROE indicators. In most studies (83.33%) the board independence was taken in consideration, in (44.44%) studies the effect of the board independence on ROE and ROA was tested at the same time. The relation between the CEO duality and ROA was tested in 11 research papers; however, the relation with ROE was studied in 9 papers. Lastly, the board meeting was not studied in any empirical research included in this study; consequently, the third hypothesis "*Board meetings have a significant effect on financial performance in the Arab contexts*" is eliminated; in this case, the researchers might not give any important to this variable or might exclude it due to the non available of information (small samples). The meta-analysis results are recognized in tables (2) and (3).

Varia	bles	(N)	(K)	$(ar{r})$	$(S_r^2)$	$(S_e^2)$	$(S_p^2)$	$(S_r^2)/(S_e^2)$	$X_{K-1}^2$
DC	ROA	905	16	0.260	0.0596	0.0153	0.0443	3.878	62.042*
BS	ROE	604	11	0.328	0.0658	0.0145	0.0513	4.5378	49.915*
BC	ROA	867	15	0.254	0.0747	0.0151	0.0595	4.932	73.977*
	ROE	522	8	0.212	0.0264	0.014	0.0124	1.887	15.09**
DU	ROA	526	11	0.390	0.1696	0.015	0.1546	11.287	124.15*
	ROE	419	9	0.482	0.1630	0.0127	0.1503	12.877	115.89*
*Sign	ificant at 19	% **Sign	ificant at	5%					

Table N° 2: The results of meta-analysis (All Variables, ROA, ROE)

**Source:** Created by authors.

Hypothesis 1 predicted that board size has a significant effect on financial performance in the Arab contexts. The results suggest that board with greater number of members tend to have return on assets ( $\bar{r}$ = 0.26) and return on equity ( $\bar{r}$ =0.33). The values of the  $X_{k-1}^2$ statistic, 62.04 and 49.92 for ROA and ROE respectively, indicate that the results are significant. Therefore hypothesis1 cannot be rejected, confirming that the board size has a significant effect on financial performance, in this case a positive significant effect; this positive significant effect is in line with the assumptions of the resource dependence theory that insists on the positive effect of large number of directors on financial performance due to the creation of links with the outside world. As shown in table (2) also, the results indicate that the board independence is positively affected financial performance, where the mean correlation values are 0.25 and 0.21 for ROA and ROE with 73.97 and 15.09 for the  $X_{k-1}^2$  statistic, respectively. As result, these findings failed to support *hypothesis* 2: "board independence has a significant effect on financial performance in the Arab contexts" and emphasize on the importance of board independence for creating financial performance as agency theory mentions.

As denoted in table (2) again, with means correlation values equal to 0.39 and 0.48 for ROA and ROE respectively, the duality of CEO has positive correlation with financial performance; according to the values of the  $X_{k-1}^2$  statistic, this correlation is significant. In this case, the hypothesis 4: "duality of CEO has a significant effect on financial performance in the Arab contexts" is accepted.

Varia	bles	(N)	(K)	$(ar{r})$	$(S_r^2)$	$(S_e^2)$	$(S_p^2)$	$(S_r^2)/(S_e^2)$	$X_{K-1}^2$
Listed	l Compani	es							
BS	ROA	849	13	0.278	0.0475	0.013	0.0344	3.6403	47.324*
	ROE	548	8	0.360	0.0517	0.0110	0.0406	4.6666	37.332*
BC	ROA	811	12	0.260	0.074	0.0129	0.0611	5.7529	69.034*
	ROE	466	5	0.217	0.015	0.0097	0.0056	1.5731	7.8653
DU	ROA	470	8	0.406	0.1823	0.0119	0.1704	15.347	122.77*
	ROE	363	6	0.511	0.1782	0.0090	0.1692	19.767	98.836*
Non-I	Listed Con	ipanies							
DC	ROA	59	3	-0.02	0.1619	0.0535	0.1084	3.0251	9.075**
BS	ROE	56	3	0.219	0.0650	0.0535	0.0115	1.2153	3.646
DC	ROA	59	3	0.168	0.1899	0.0506	0.1393	3.7543	11.263*
BC	ROE	56	3	0.165	0.1160	0.0571	0.0653	2.2880	6.864**
DU	ROA	56	3	0.261	0.3167	0.0465	0.2702	6.8071	20.421*
DU	ROE	56	3	0.292	0.0227	0.0448	-0.0221	0.5062	1.51847

Table N°3: The results of meta-analysis (All variables, ROA, ROE, listed and nonlisted companies)

\*Significant at 1%, \*\*Significant at 5%

Source: Created by authors.

Table 3 presents the estimates obtained by applying meta-analysis method to provide information for exploring the difference between the effects of board of directors' characteristics on financial performance in both listed and non-listed companies. The main findings are as follows:

- With respect to listed and non listed companies sub-grouping, the results show significant effects of board characteristics on ROA; except the mean correlation value of the board size, all the mean correlation values are positive.

- In the other side, board independence has no significant effect on the ROE of listed companies and both board size and duality have no significant relationship in the non-listed companies.

Those results could be mainly due to the weak number of studies consolidated to test the relation between board characteristics and financial performance in the non-listed companies.

## 4. CONCLUSION

Many empirical studies on financial performance are interested by the identification of the relationship between financial performance indicators and corporate governance mechanisms. This study explored if the board of directors characteristics, which consisted of size, meeting, independence and duality, have a significant effects on return on assets and return on equity in the Arab contexts. To do so, 18 research papers were consolidated and used as inputs for the meta-analysis method which was employed to test this relationship.

The research's findings showed positive significant effects of all independent variables included in this study on the financial performance indicators, ROA and ROE. Thus, the results were in line with the main corporate governance theories, especially, agency theory and resource dependence theory. In addition, with regard to listed and non-listed companies sub-grouping, the results indicated that listed companies' performance was more affected by board characteristics than non-listed companies.

By focusing on the Arab contexts, this study was undertaken with the intention of filling the gap. Many previous studies that tested the effect of corporate governance mechanisms on financial performance using meta-analysis have been focused on developed countries, thus this study is one of the few studies that applied meta-analysis to explore the relation between corporate governance and financial performance in the Arab contexts.

Notwithstanding the results, this research suffers from a number of limitations especially the lack of empirical research papers that were included in this study, since many papers were excluded due to the conditions that were proposed at the beginning of this study. Thus, future studies are recommended to focus more on the Arab contexts, to consider more corporate governance proxies (ownership structure, audit committee, external auditing, board committees, etc), to measure financial performance using market-based indicators. Moreover, future studies could explore the effect of corporate governance mechanisms on financial performance in a specific kind of company (financial, non financial, familiar, etc.).

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