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The Effect of Voluntary Disclosure and Transparency on Directors’ Remuneration Control

Abstract

The economic and financial crisis experienced by the world economy, during the years 2008-2012, has again highlighted the weaknesses of the capitalist system and the need to impose limitations on certain agents which have a significant influence on the future of business and the economy in general.

In this sense, the remuneration excesses committed by some Boards of Directors, especially in the financial sector, have shown the importance of agency problems once again. In these years, it was not uncommon to find cases in which Egyptian companies had awarded millions in compensation, salaries or bonuses to their executives and directors, while ultimately they ended up being rescued by governmental authorities. This and other situations of a similar nature have weakened the mood of Egyptian society, especially when some firms that had been committing abuses were funded by the Egyptian government, while population had to make sacrifices to overcome the crisis. Therefore, the configuration of the compensation of the directors has received increasing attention in recent times.

Under these situations, the recommendations taken at national level have focused on increasing the information transparency on compensation practices, in specially, about the detailed remuneration policy and individual remuneration granted to the members of Board of Directors.

The importance of this study is due to that there are a lot of studies that examine the relationship between directors’ compensation and “board independence”, and directors’ compensation and firm performance, while a relatively few examine the relationship between disclosure on board compensation and directors’ compensation level.

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In this context, this paper provides an empirical analysis of the transparency and voluntary disclosure on board remuneration and their impact on the level of directors’ compensation in Egypt in order to determine whether the directors’ compensation is lower ("transparency control effect" and "transparency deterrent effect") or is higher ("effects of transparency on increasing competition in pay") among firms with more transparency of directors’ compensation. For this purposes, a unique panel of data has been put together from listed Egyptian companies for the period 2013–2018.

**Keywords:** Voluntary Disclosure – Transparency – Director Remuneration

ملخص البحث


ومع هذا الوضع زادت الورقية على مكافآت المديرين بواسطة مجلس الإدارة, مما أظهر أهمية نظرية الوكالة مرة أخرى بالانكس في القطاع المالي.

ومع هذا الوضع أيضاً, ليس من غير المألوف أن نجد بعض الحالات في الشركات المصرية تمنح للمديرين ملايين من المكافآت، المرتبات أو الحافز, وهذا على العكس في الشركات الحكومية.

هذا بالإضافة إلى اشكال أخرى مشابه تؤثر بالسلب على المجتمع المصرى, بالانكس عندما نجد بعض الشركات المصرية تمنح المكافآت الممولة من الدولة, بينما يعاني باقي المجتمع لعبور هذه الازمات الاقتصادية.

بناءً على ما سبق فإن المكافآت الممولة للمديرين ازدادت أهميتها في الأونة الأخيرة. وفقا لهذه الظروف, زادت اهمة التوصيات التي تركز على الحاجة إلى زيادة الشفافية في المعلومات عن ممارسات منح المكافآت للمديرين.

وتراجع أهمية هذه الدراسة إلى لقية الدراسات التي تناولت بالفصاح العلاقة بين مكاثأت المديرين والاستقلالية مجلس الإدارة من ناحية, العلاقة بين مكاثأت المديرين وإدارة المشروع من ناحية أخرى.

يركز هذا البحث على التحليل العملي للعلاقة بين الشفافية والإفصاح الاختياري عن المكاذقات وتاثيرها على مستوى مكاذقات المديرين في البيئة المصرية, وذلك لتحديد ما إذا كان مكاذقات المديرين منخفضة أو مرتفعة بين المشروعات التي تتم بزيادة مستوى الشفافية عن مكاذقات المديرين, وذلك بالتطبيق على مجتمع عينة من الشركات المصرية في الفترة من 2012 إلى 2018.

الكلمات المفتاحية: الإفصاح الاختياري – الشفافية – مكاذقات المديرين
1. INTRODUCTION

The economic and financial crisis experienced by the world economy during the period 2008–2012 has highlighted again the need to impose boundaries on certain agents which have a significant impact on the course of business and the overall economy. In this situation, both the literature and international organizations statements grant to corporate governance a significant importance, basically for two reasons. Firstly, because corporate governance represents the structure that allows business set their objectives, the means to achieve them and to oversee and monitor their compliance (Cañibano 2006, Albitar 2015). Secondly, because an effective corporate governance system helps to achieve the degree of assurance necessary for the proper functioning of a market economy (Al Maskati and Hamdan 2017).

Among others, one of the problems that have contributed to stress the importance of corporate governance control is the excessive compensation to some Board of Directors. The scandals that have emerged in relation to this subject have contributed to increase the interest on the formation of the compensation of the directors and on the information provided by companies about that issue (transparency). In line with this, the number of documents related to the compensation of corporate management bodies has increased as so has the remuneration of these groups (Murphy 1999, Hong, Li et al. 2016).

As in the management–shareholders conflict of interest case, the remuneration contracts are commonly used to align the interests of directors and shareholders (Boumosleh 2009, Persons 2012). However, what until recently was one of the devices to alleviate the potential opportunistic behavior of managers and directors, in recent times, has become a problem in itself (Alzaga 2012) as it promotes managerial self-dealing (Westbrook 2010, Ran, Fang et al. 2015).

In this case, the dilemma of the compensation received by the members of the board, runs between the "sufficiency" and "excess". In other words, the remuneration must be sufficient to ensure the proper performance of their
duties but should not be excessive since the latter could lead to increased laxity in its control functions (Fama and Jensen 1983, Coffee Jr 2001, Badertscher, Katz et al. 2013). The problem becomes even more obvious if we consider the fact that the board itself is responsible for determining the compensation of its members, something that gives them enough power to extract rents from firms, in order to satisfy their own interests, contributing to a conflict of interest with respect to other stakeholders (Bebchuk and Fried 2004, Duffhues and Kabir 2008).

Under these circumstances, one of the recommendations taken at international, European and national level have focused on increasing the information transparency on compensation practices, in specially, about the detailed compensation policy and individual compensation granted to the members of Board of Directors (Ben-Amar and Zeghal 2011, Liu, Valenti et al. 2016). At theoretical level, there are two complementary theories. On one hand, if the design of optimal remuneration contracts is efficient (contracting hypothesis) the directors have an incentive to disclose their remuneration and vice versa, namely, when the transparency and voluntary disclosure is greater, this will moderate the directors’ remuneration. On the other hand, if the transparency and voluntary disclosure is lower, the directors will take the advantage of their power to increase their compensation at the expense of shareholders (managerial power approach) (Manzaneque, Merino et al. 2014, Chung, Judge et al. 2015).

Much of the existing empirical research on director compensation control has focused on the relation between the “board independence” and director compensation (Core, Holthausen et al. 1999, Cheng and Firth 2005, Brick, Palmon et al. 2006, Basu, Hwang et al. 2007, Andreas, Rapp et al. 2009). Despite the expanding literature regarding director compensation, few studies (Nagar, Nanda et al. 2000, Coulton, Clayton et al. 2001) have focused on analyzing the impact of the transparency and disclosure of information on the level and structure of the remuneration (Ben-Amar and Zeghal 2011, Schmidt 2012).
In this context, this paper provides an empirical or (simulation) analysis of the transparency and voluntary disclosure on board compensation and their impact on the level of directors’ compensation in Egypt to determine whether the directors’ compensation is lower ("transparency control effect" and "transparency deterrent effect") or is higher ("effects of transparency on increasing competition in pay") among firms with more transparency of directors’ compensation. For this purposes, a unique panel of data has been put together from 73 listed Egyptian companies for the period 2013–2018.

The paper contributes to the existing literature in a number of ways. First, it studies the effect that transparency and voluntary disclosure about board compensation on directors’ compensation level. Although there are very much studies that examine the relationship between directors’ compensation and “board independence” and directors’ compensation and firm performance, relatively few examine the relationship between disclosure on board compensation and directors’ compensation level. Moreover, in the Egyptian context it is regarded as a novel work. Second, the study goes one step further in the transparency of board remuneration disclosures by constructing a disclosure index. The study expects that the proposed transparency index, serves the Egyptian legislators, associations and researchers for future studies of the transparency of directors' remuneration. Third, the results show that, contrary to what one might expect, in the period under review the transparency contributes to the increase in directors' compensation, so it explained the majority of competitive effect in wages between the companies analyzed.

The rest of study is organized as follows: first, carry out a review of previous literature on the subject; second, display the research design, defining the sample and the variables under study and the application of relevant statistical techniques; third, analyzing the main results; and, finally, discuss the main conclusions.
2. TRANSPARENCY AND VOLUNTARY DISCLOSURE ON BOARD COMPENSATION.

2.1. Transparency and voluntary disclosure on board compensation: A literature review

According to agency theory, the separation of ownership and control makes information asymmetries due to misalignment of managers and shareholders’ interest. Information asymmetries may create a transfer of wealth from owners to managers, leading current and potential investors to decrease share prices if there is not a proper financial disclosure. In order to control and reduce agency costs, control mechanisms must be considered to ensure that managers act in the interests of the owners. Voluntary disclosure and structure of corporate governance are two of the documental mechanisms that significantly decrease the agency costs that result from separation of ownership and control. (Alhazaimeh, Palaniappan et al. 2014, Chung, Judge et al. 2015).

However, previous studies showed that firm’s characteristics affect the level of voluntary disclosure in order to decrease the adverse effects generated by information asymmetry between the agent (managers) and the principal (shareholders). Voluntary information suggesting a higher control of the external directors on the board and consequently, a smaller need to reduce information asymmetries between shareholders and directors with higher voluntary disclosure (Willekens, Vander Bauwhede et al. 2005, Kang, Kumar et al. 2006).

Particularly, Gul and Leung (2004) results disclose that independent directors with a wide professional expertise act as an important control mechanism in companies where the president and the chief executive officer responsibilities depend on the same person.

The voluntary disclosure and transparency in corporate governance have been identified as key elements to minimize information asymmetries between the stakeholders (Healy and Palepu 2001, Al-Janadi, Rahman et al. 2013). Regarding the remuneration, if full information is provided on remu-
neration packages and their relationship with performance, compensation policies and procedures, shareholders can assess whether the board is negotiating effectively and take appropriate action and whether it is in the form of dismissing directors, or the adoption of resolutions (Ferrarini and Moloney 2005). In this sense, the compensation transparency theory (Geraats 2006, Bernstein 2017) argues that if the compensation of directors of the company is transparent, the design of optimal compensation contracts will be efficient (the optimal contracting approach or contracting hypothesis). This contributes to the diligence of directors in respect of their own remuneration who would make transparent disclosures to assure that stakeholders do not receive inefficient pay (Muslu 2010).

By contrast, the lack of transparency makes it more likely to be given the pattern of the theory of domination of the administration or managerial power approach. In this case, the management takes more power to increase its own compensation at the expense of other stakeholders (Kalyta 2009). The shareholders would see this excessive compensation as extraction of rents or, in others words, an expropriation of their wealth. So, in this scenario, the management have an incentive to unclear and legitimize—or, more generally, to camouflage—their extraction of rents (Bebchuk, Fried et al. 2002).

Following logical reasoning, Information on directors’ compensation stands as the proper sustenance for investors in order to assess the good practice of management in this regard, and exercise a controlling function on them (transparency control effect). So, the transparency probably affects salary levels. In addition, the directors are sensitive to the publication of information on compensation, as it may affect their own interests (reputation, professional prestige, honor etc.) (Delaney and Magraw 2008, Bernstein 2017). For this reason, the information on remuneration acts as a deterrent for abusive or un-

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1 Also known as rent seeking, managerial power, opportunism or skimming hypothesis. Bebchuk, R. P., et al. (2002). "Managerial power and rent extraction in the design of executive compensation." University of Chicago Law Review 69: 751-846.
ethical behaviors in this regard (*deterrent effect of transparency*). The individualized disclosure is isolated as an important mechanism for assisting shareholders to understand company compensation policy and its relationship with company performance (Ferrarini and Moloney 2005). Conversely, without adequate information, the shareholders cannot control the compensation practices of their boards. At empirical level, some studies support the above theories. For example, Coulton *et al.* (2001) find that the transparency degree of compensation disclosure is negatively related to the level of CEO compensation, and is positively related to firm size.

These theoretical approaches contrast with the fact that the pay transparency also allows executives and company boards to observe the pay level and structure of their rival companies (Swan and Zhou 2006) and, therefore, the director compensation will rise as a consequence of disclosure to avoid the directors leave of the companies attracted by the high salaries of the competitors (*effects of transparency on increasing competition in pay*) (Friedman 2014). In this sense, Swan and Zhou (2006) Friedman (2014) show that after disclosure, the total compensation of Canadian CEOs increased relative to U.S. CEOs. However, the increase resulted from higher incentive pay due to a stronger pay-performance relation.

This theoretical and empirical framework underpins the assertion that transparency and disclosure on remuneration are significant to explain the high levels of compensation that generates markets distrust on business administration, which justifies the interest of regulators in this area.

### 2.2. Transparency and voluntary disclosure on board compensation: reform in Egypt

The study has been established through codes of good governance practices advising on disclosure about directors' remuneration policy and individual remuneration (see Table 1).
### Table 1: Standards and recommendations on information regarding director’s compensation

<table>
<thead>
<tr>
<th>Voluntary disclosure</th>
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<tr>
<td>The company’s remuneration policy, as approved by its Board of Directors, should specify at least the following points:</td>
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<tr>
<td>a) The amount of the fixed components, itemized where necessary, of board and board committee attendance fees, with an estimate of the fixed annual payment they give rise to;</td>
</tr>
<tr>
<td>b) Variable components, in particular:</td>
</tr>
<tr>
<td>i) The type of directors they apply to, with an explanation of the relative weight of variable to fixed remuneration items.</td>
</tr>
<tr>
<td>ii) Performance evaluation criteria used to calculate entitlement to the award of shares or share options or any performance-relates remuneration;</td>
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<tr>
<td>iii) The main parameters and grounds for any system of annual bonuses or other non cash benefits; and</td>
</tr>
<tr>
<td>iv) An estimate of the sum total of variable payments arising from the remuneration policy proposed, as a function of degree of compliance with pre-set targets or benchmarks.</td>
</tr>
<tr>
<td>c) The main characteristics of pension systems (for example, supplementary pensions, life insurance and similar arrangements), with an estimate of their amount or annual equivalent cost.</td>
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<tr>
<td>d) The conditions to apply to the contracts of executive directors exercising senior management functions. Among them:</td>
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<tr>
<td>i) Duration;</td>
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<td>ii) Notice periods; and</td>
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<td>iii) Any other clauses covering hiring bonuses, as well as indemnities or “golden parachutes” in the event of early termination of the contractual relation between company and executive director.</td>
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The notes to the annual accounts should list individual directors’ remuneration in the year, including:
a) A breakdown of the compensation obtained by each company director, to include where appropriate:
   i) Participation and attendance fees and other fixed director payments;
   ii) Additional compensation for acting as chairman or member of a board committee;
   iii) Any payments made under profit-sharing or bonus schemes, and the reason for their accrual;
   iv) Contributions on the director’s behalf to defined contribution pension plans, or any increase in the director’s vested rights in the case of contributions to defined benefit schemes;
   v) Any severance packages agreed or paid;
   vi) Any compensation they receive as directors of the other companies in the group;
   vii) The remuneration executive directors receive in respect of their senior management posts;
   viii) Any kind of compensation other than those listed above, of whatever nature and provenance within the group, especially when it may be accounted a related-party transaction or when its omission would detract from a true and fair view of the total remuneration received by the director.

b) An individual breakdown of deliveries to directors of shares, share options or other share-based instruments, itemized by:
   i) Number of shares or options awarded in the year, and the terms set for their execution;
   ii) Number of options exercised in the year, specifying the number of shares involved and the exercise price;
   iii) Number of options outstanding at the annual close, specifying their price, date and other exercise conditions;
   iv) Any change in the year in the exercise terms of previously awarded options.

c) Information on the relation in the year between the remuneration obtained by executive directors and the company’s profit, or some other measure of enterprise results.
The study simulates the code of corporate governance from the Olivencia Report (1998) that recommended the disclosure of directors’ individual packages and specific disclosure, to the greatest extent possible, of the individual components of remuneration and sets all the detailed information to include in the annual accounts.

2.3 RESEARCH HYPOTHESIS
The study sets the following two hypotheses:

H1: There is a positive relationship between transparency and the level of directors’ compensation.

H2: There is a positive relationship between voluntary disclosure and the level of directors’ compensation.

2. RESEARCH METHODOLOGY
3.1. Sample
In order to estimate the effect of voluntary disclosure on directors’ compensation, the study uses a sample of 73 listed companies on the Egyptian stock exchange during the period 2013 to 2018.

The choice of Egyptian companies is explained by the fact that the corporate governance system is a special example of a unitary board system and due to the particular characteristics of the Board of Directors for this geographic and normative context. Also, it is an important context due to the increasing political pressure to encourage the level of transparency and reasonableness of compensation systems.

The sources of information that the study has examined in order to capture all voluntary information on compensation to directors are as follows: the company rules, the Regulation of the Board of Directors, the notes on the Annual Accounting Reports, the Annual Report of the Board Compensation and Meeting with the members of the board of directors.
3.2. Variables

3.2.1. Transparency index of directors’ compensation

For the purposes of our analysis, the study estimates two disclosure indexes: a) the voluntary disclosure index on pay strategy to directors (PSVD), and, b) the voluntary disclosure index on individual compensation received by directors (ICVD). Also, the study calculated the global index of transparency (ITR) about board’ remuneration taking into account both types of information. The recommendations which have been taken into account in order to work out the transparency rates are listed in Table 2. To take this effect, the study used the following categorization of the disclosure variable: 1 if the information is presented, 0 if the information is not presented and “N.A.” if the recommendation is not applicable.

Table 2: Voluntary disclosure on directors’ remuneration items list.

<table>
<thead>
<tr>
<th>THE COMPANY’S REMUNERATION POLICY</th>
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<tr>
<td><strong>FIXED COMPONENTS</strong></td>
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<tr>
<td>a.1. Amount of the fixed components.</td>
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<tr>
<td>a.2. Itemized information on board and board committee attendance fees.</td>
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<td>a.3. Estimation of the fixed annual payment.</td>
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<td><strong>VARIABLE COMPONENTS</strong></td>
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<td>b.1. Types of directors they are applied.</td>
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<td>b.2. Relative weight of variable to fixed remuneration items.</td>
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<td>b.3. Performance evaluation criteria used to calculate entitlement to the award of share or share options or any performance-related remuneration.</td>
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<tr>
<td>b.4. The main parameters and grounds for any system of annual bonuses or other, non cash benefits.</td>
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<tr>
<td>b.5. Estimation of the sum total of variable payments arising from the remuneration policy proposed, as a function of degree of compliance with pre-set targets or benchmarks.</td>
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### PENSION SYSTEMS

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<tr>
<td><strong>c.1.</strong></td>
<td>Main characteristics of pension systems.</td>
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<tr>
<td><strong>c.2.</strong></td>
<td>Estimation of their amount or annual equivalent cost.</td>
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</tbody>
</table>

### CONTRACTS CONDITIONS

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<td><strong>d.1.</strong></td>
<td>Contracts conditions for executive directors exercising senior management functions.</td>
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</table>

### SUB TOTAL REMUNERATION POLICY DISCLOSURE INDEX

### INDIVIDUAL DIRECTORS’ REMUNERATION COMPENSATION

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<tr>
<td><strong>e.1.</strong></td>
<td>Participation and attendance fees and other fixed director payments.</td>
</tr>
<tr>
<td><strong>e.2.</strong></td>
<td>Additional compensation for acting as chairman or member of a board committee.</td>
</tr>
<tr>
<td><strong>e.3.</strong></td>
<td>Any payments made under profit-sharing or bonus schemes, and the reason for their accrual.</td>
</tr>
<tr>
<td><strong>e.4.</strong></td>
<td>Contributions on the director’s behalf to defined-contribution pension plans, or any increase in the director’s vested rights in the case of contributions to defined-benefit schemes.</td>
</tr>
<tr>
<td><strong>e.5.</strong></td>
<td>Any severance packages agreed or paid.</td>
</tr>
<tr>
<td><strong>e.6.</strong></td>
<td>Any compensation they receive as directors of other companies in the group.</td>
</tr>
<tr>
<td><strong>e.7.</strong></td>
<td>The remuneration executive directors receive in respect of their senior management posts.</td>
</tr>
<tr>
<td><strong>e.8.</strong></td>
<td>Any kind of compensation other than those listed above.</td>
</tr>
</tbody>
</table>
SHARE, SHARE OPTIONS OR OTHER SHARE-BASED INSTRUMENTS

1. Number of shares or options awarded in the year, and the terms set for their execution.

2. Number of options exercised in the year, specifying the number of shares involved and the exercise price.

3. Number of options outstanding at the annual close, specifying their price, date and other exercise conditions.

4. Any change in the year in the exercise terms of previously awarded options.

RELATION BETWEEN REMUNERATION AND MEASURE OF RESULTS

1. Relation in the year between the remuneration obtained by executive directors and the company’s profits, or some other measure of enterprise results.

SUB TOTAL INDIVIDUAL REMUNERATION DISCLOSURE INDEX

Following the path of previous studies, the study builds an index that assigns the same importance to each item considered (Camfferman & Cooke, 2002; Inchausti, 1997). So, the disclosure index for company “J” to the year $t$ ($J = 1$ to 73) is:

\[ I_{jt} = \frac{\sum_{i=1}^{n_p} X_{it}}{n_j} \]

\[ 0 \leq I_{jt} \leq 1 \]

Where $X_{it}$ represent the voluntary disclosure on pay strategy to directors or on individual compensation received by directors for business $i$ in the period $t$ (when the dummy variable which represents disclosure takes value 1) and
\( n_j \) is total points that can be get if the business reports on all aspects recommended.

### 3.2.2. Board of Directors’ compensation.

As the dependent variable, the mean of the level of compensation given to each member of the board has been used. The total remuneration includes the following concepts: fixed and variable remuneration, salary fees, attendance fees, travelling indemnity, stock options and/or other financial (Merino, Manzaneque, & Banegas, 2012). Following the standard approach in others studies (Boyd, 1994; Finkelstein & Hambrick, 1989), a logarithmic transformation of the dependent variable was applied to reduce heterocedasticity. In the same way, remuneration concepts like redundancy payment or insurance premiums were not included, due to their irregular character and high amount, which could distort the results and make their interpretation difficult.

A more detailed description of the variables is included in Table 3.

### Table 3: Variables description

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Typology</th>
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<tbody>
<tr>
<td><strong>Compensation variables</strong></td>
<td></td>
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<tr>
<td>LnHCA</td>
<td>Natural log of total compensation divided per members of the Board of Directors</td>
<td>Numeric</td>
</tr>
<tr>
<td><strong>Transparency index</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSVD</td>
<td>Voluntary disclosure index on pay strategy to directors</td>
<td>Numeric</td>
</tr>
<tr>
<td>ICVD</td>
<td>Voluntary disclosure index on individual compensation received by directors</td>
<td>Numeric</td>
</tr>
<tr>
<td>ITR</td>
<td>Voluntary disclosure index on board ‘remuneration’</td>
<td>Numeric</td>
</tr>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board independence</td>
<td>BOWNER</td>
<td>Board ownership measured by proportion of shares owned by the board of</td>
</tr>
<tr>
<td>Business characteristics</td>
<td>Directors</td>
<td></td>
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<tr>
<td>--------------------------</td>
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<td></td>
</tr>
<tr>
<td>CD</td>
<td>CEO duality measured by dummy variable which takes value 1 when both roles (Chairman and CEO) are held by the same person, an 0 when they are not</td>
<td></td>
</tr>
<tr>
<td>LID</td>
<td>Lead independence director, measured by dummy variable which takes value 1 if there is a lead independence director and 0 in other case</td>
<td></td>
</tr>
<tr>
<td>BO</td>
<td>Board outsider measured by proportion of outside independent directors on the board of directors</td>
<td></td>
</tr>
<tr>
<td>BS</td>
<td>Board size measured by number of members in the board of directors</td>
<td></td>
</tr>
<tr>
<td>PER</td>
<td>Performance measure by ROA (Return on assets, ratio of operating income to net assets)</td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>Corporate size measured by the logarithm of total assets</td>
<td></td>
</tr>
</tbody>
</table>
| INDUS                    | 1. Oil and energy  
2. Basic materials, manufacturing and construction  
3. Consumer goods  
4. Consumer services  
5. Financial services and real estate  
6. Technology and Telecommunications |

3.2.3. Control variables

Previous studies have demonstrated the effect of board and business characteristics on directors’ compensation across different countries. In this sense, some variables representative of these have been used as control variables.
a) Board Characteristics and directors’ compensation.

Board independence is almost universally viewed as a desirable governance characteristic (Nelson, Gallery, & Percy, 2010). The main measures that determine the “independence” are: duality, independent directors, size board and board shareholding.

In a company, there is **duality** if the figure of the Chairman and Chief Executive Officer falls in the same person. Some authors (Baek, Johnson et al. 2009) (Jensen & Meckling, 1976; Jensen M., 1986)(Chen, Chen et al. 2011, Oded 2020) suggest that when there is duality, it increases the risk that the CEO can develop policies that favor their own interests to the detriment of the company. In line with international codes, recommends that “when a company’s Chairman is also its chief executive, an independent director should be empowered to request the calling of board meeting or the inclusion of new business on the agenda; to coordinate and give voice to the concerns of external directors; and to lead the board’s evaluation of the Chairman”. This independent director is often called **Lead or Senior Directors** and its principal function is to control the CEO’s performance, in order to reduce the risks arising from the accumulation of power in one person(Dube and Pakhia 2013). Therefore, the study expects that the separation of CEO/Chairman, or the presence of Lead Director in the case of duality, has a negative relationship with the directors’ compensation, i.e., that this variable exerts a moderating effect on the compensation granted to members of the board of directors.

All companies are recommended by the codes of corporate governance to appoint ‘**independent**’ directors on their boards. Those directors are supposed to provide an independent voice to the functioning of the board and provide their expertise to the executive directors (Parthesarathy, Menon, & Bhattacherjee, 2007). So, the presence of independent directors in the board is expected to offer shareholders the greatest protection in monitoring management (Baysinger & Bautler, 1985)(Ho, Tower et al. 2013) and in reducing the CEO power (Kalyta, 2009). Following the theoretical arguments, it is expected that more independent directors on the board are associated with less
managerial opportunism and more efficient contracts. However, empirically, most of the researches report contradicting and inconsistent outcomes. While authors like (Core, Holthausen, et al. 1999) found that firms with a greater fraction of independent directors on the board are associated with higher executive remuneration, a negative association is reported by (Basu, Hwang, et al. 2007). Given that the relationship between outside director and directors’ compensation is not clear, the study contrast the relationship between the above variables in the Egyptian context, without predetermining the expected sign.

The **size of the board** of directors is expected to be associated with less effective board monitoring, based on the argument that larger boards are less effective (because larger boards are more likely to have greater coordination problems) and more susceptible to the influence by the CEO (it is easier for a CEO to capture the board, and individual board members are less likely to be held accountable) (Core, Holthausen, & Larcker, 1999; Jensen M. , 1993; Yermack, 1996)(Yilmaz, Kurt–Gumus et al. 2017). The study expects that board size have a negative relationship with the directors’ compensation.

The agency theory proposes that **board stock ownership** is a powerful incentive for fulfilling control responsibilities (Beatty & Zajac, 1990; Holderness & Sheehan, 1988)(Varottil 2010). Thereby, when managers own more shares, the agency conflict between inside managers and outside shareholders is lessened – according to the interest convergence hypothesis (Jensen & Meckling, 1976)(Patelli and Prencipe 2007, Baek, Johnson et al. 2009). Thus, directors with high shareholdings should have interests more aligned with shareholders and may have stronger incentive to monitor the CEO (Shivdasani & Yermack, 1999) and however it is expected to have a positive relationship with board control (Boyd, 1994). Also, in these cases, the need for higher direct remuneration is more reduced, because they already receive substantial cash dividends from the shares owned (Cheng & Firth, 2005). So, it is expected that directors with shareholding exert a moderating effect on the director total compensation.
b) Firm characteristics

Previous studies have identified a strong relationship between firm size and director compensation (Andreas, Rapp, & Wolff, 2009; Brick, Palmon, & Wald, 2006). It is expected that larger firms will demand higher quality directors and so the directors will receive relatively higher compensation (Duffhues & Kabir, 2008).

A number of studies have similarly confirmed that company performance is of significance in director compensation (Andreas, Rapp, & Wolff, 2009; Cheng & Firth, 2005).

The last element considered was the industries in which the companies were involved. Prior studies have indicated that the industry sector is also a significant determinant of director compensation. Schiehll and Bellavance (2009) explain that the external monitoring functions, such as the corporate control market, the external managerial labor market, and the product market, are assumed to be industry-related mechanisms, and their impact is determined by the industry categorical variables.

3.3. Methodology

In order to test the hypotheses, several dependence models were developed based on linear panel data regression, which is applied to multiple phenomena observed over multiple periods for the same firms (Hsiao & Lightwood, 1994). Following this methodology, a data sample of 438 (73 companies x 6 years) was developed, which is a short (T=6), lineal and strongly balanced panel.

In accordance with what has been put forward, different variants of the following model of panel data have been estimated:

\[ y_{it} = \mu_i + \beta \cdot IT_{it} + \sum_{m=1}^{n} \delta CV_{it} + y_{it-1} + \epsilon_{it} \]  

\[ [2] \]

We assumed parameter homogeneity, which means that \( a_i = \alpha \) for all \( i, t \) and \( \beta_i = \beta \) for all \( i, t \).
Where, \( y_{it} \) is the dependent variable (board of directors compensation); \( IT_{it} \) is the transparency index for the business i in the period t (where IT is identified as PSVD, ICVD or ITR according to the specific case of study), and \( \sum_{m=1}^{n} C_{it} \) are the control variables (see Table 3). Take into account the temporal persistence of earnings, the model includes the first lag of the dependent variable (Lilling, 2006; Canarella & Nouray, 2008).

Therefore, three variants of the model were estimated based on the type of the transparency index (Model 1. PSVD; Model 2. ICVD; Model 3. ITR) (see Table 6).

The objective of study is to provide empirical evidence on the relationship between transparency and the level of directors’ compensation. So, under the assumption of compliance with the hypotheses of "transparency control effect" and "transparency deterrent effect", it is expected a negative relationship between the two variables (\( \beta < 0, H1 \)). However, under the assumption of compliance with the hypothesis of “effects of transparency on increasing competition in pay” to directors it is expected a positive relationship voluntary disclosure and directors’ remuneration (\( \beta > 0, H2 \)).
4. RESULTS

The descriptive statics for the variables is reported in Table 4.

**Table 4: Descriptive Summary Statistics on Panel Data Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>St. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variables (Board Compensation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LnHCA</td>
<td>11.8507</td>
<td>2.2716</td>
<td>0</td>
<td>14.56</td>
</tr>
<tr>
<td>Transparency index</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSVD</td>
<td>0.6972</td>
<td>0.2683</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>ICVD</td>
<td>0.3118</td>
<td>0.3495</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>ITR</td>
<td>0.4793</td>
<td>0.2637</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Board independency</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOWNER</td>
<td>0.2304</td>
<td>0.2397</td>
<td>0</td>
<td>0.8</td>
</tr>
<tr>
<td>CD</td>
<td>0.6322</td>
<td>0.4828</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>BO</td>
<td>0.3553</td>
<td>0.1679</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>LID</td>
<td>0.3333</td>
<td>0.4721</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>BO</td>
<td>0.3559</td>
<td>0.1679</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>BS</td>
<td>12.0387</td>
<td>3.7651</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td>Business characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>21.1180</td>
<td>3.3246</td>
<td>0</td>
<td>26.89</td>
</tr>
<tr>
<td>INDUS</td>
<td>3.2877</td>
<td>1.4773</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

The voluntary disclosure average index on pay strategy to directors (PSVD) for the period 2013–2018 is around 0.70, more than double of voluntary disclosure average index on individual compensation received by directors (ICVD, 0.31). This goes to highlight the unwillingness of companies to provide individual information of wages, although there has been significant progress in this sense.

With respect to the relation between the transparency index and other variables, the binary correlations between them are reported in table 5.
Table 5: Correlation Matrix

<table>
<thead>
<tr>
<th>Dependent variables (Board Remuneration)</th>
<th>LaHCA</th>
<th>PSVD</th>
<th>ICVD</th>
<th>ITR</th>
<th>BOWNER</th>
<th>CD</th>
<th>LID</th>
<th>BO</th>
<th>BS</th>
<th>PER</th>
<th>CS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transparency index</strong></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSVD</td>
<td>0.347***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICVD</td>
<td>0.604**</td>
<td>0.438***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITR</td>
<td>0.259***</td>
<td>0.311***</td>
<td>0.815***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Board independence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOWNER</td>
<td>-0.080</td>
<td>0.031</td>
<td>-0.146*</td>
<td>-0.0624</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>CD</td>
<td>0.120**</td>
<td>0.042</td>
<td>0.011</td>
<td>0.016</td>
<td>0.025</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LID</td>
<td>0.159***</td>
<td>0.202***</td>
<td>0.041</td>
<td>0.159***</td>
<td>0.109</td>
<td>0.541***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BO</td>
<td>0.348***</td>
<td>0.325***</td>
<td>0.247***</td>
<td>0.272***</td>
<td>-0.100***</td>
<td>0.141**</td>
<td>0.178***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BS</td>
<td>0.111*</td>
<td>0.070</td>
<td>0.086</td>
<td>0.100*</td>
<td>-0.225***</td>
<td>0.122*</td>
<td>-0.057</td>
<td>-0.086</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Business characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PER</td>
<td>0.020</td>
<td>0.005</td>
<td>-0.050</td>
<td>0.002</td>
<td>0.033</td>
<td>0.120*</td>
<td>0.077</td>
<td>0.039</td>
<td>0.125*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>0.679***</td>
<td>0.381***</td>
<td>0.330**</td>
<td>0.410***</td>
<td>-0.238***</td>
<td>0.099</td>
<td>0.099</td>
<td>0.255***</td>
<td>0.659***</td>
<td>-0.022</td>
<td></td>
</tr>
<tr>
<td>INDUS</td>
<td>-0.037</td>
<td>0.048</td>
<td>0.131*</td>
<td>0.107*</td>
<td>-0.093</td>
<td>-0.018</td>
<td>-0.103***</td>
<td>0.121**</td>
<td>0.116**</td>
<td>0.052</td>
<td>0.098</td>
</tr>
</tbody>
</table>

* The correlation is significant at 0.10 (bilateral)
** The correlation is significant at 0.05 (bilateral)
*** The correlation is significant at 0.01 (bilateral)

Variables are defined in Table 4.

The results show that more outsiders on the board (BO) and more size of the company (CS) increase the level of disclosure about directors’ compensation (Coulton, Clayton, & Taylor, 2001; Laskmana, 2008). Therefore, to avoid multicollinearity, the study eliminated the above variables of the proposed regression model.

Other notable characteristics of the sample are: the large size of the boards, with an average of 12 members and a case in which this becomes 24 members; regardless the duality of Chairman and Chief Executive Officer (as roles being performed by same person), the results shows this to be the case in 63% of the cases looked at; and the important participation of the members of the
board in the shareholders (mean 0.23, Max. 0.8). This is important to understand the particular context of the Egyptian case.

Finally, the variable LnHCA, level of directors’ compensation, shows a stable behavior from 2015.

The set of regression results is reported in Table 6. In column (1), the predicted sign on each variable in the regression is indicated. Industry and yearly indicator variables are included in all models to capture potential impact in directors’ payments across industries and years.

**Table 6: Estimation: OLS, Fixed and Random Effects**

<table>
<thead>
<tr>
<th>Expected signs</th>
<th>Compensation by director LnHCA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
</tr>
<tr>
<td></td>
<td>OLS</td>
</tr>
<tr>
<td>LnHCA_1</td>
<td>+</td>
</tr>
<tr>
<td>PSVD</td>
<td>-</td>
</tr>
<tr>
<td>ICVD</td>
<td>-</td>
</tr>
<tr>
<td>ITR</td>
<td>-</td>
</tr>
<tr>
<td>BOWNER</td>
<td>+</td>
</tr>
<tr>
<td>CD</td>
<td>+</td>
</tr>
<tr>
<td>BS</td>
<td>+</td>
</tr>
<tr>
<td>PER</td>
<td>+</td>
</tr>
<tr>
<td>Industry (dummies)</td>
<td>Yes</td>
</tr>
</tbody>
</table>
This table displays the impact of characteristics of the board and performance on the level of compensation.

Variables are defined in Table 2.

Random or fixed effects are shown, depending on the value obtained for Hausman’s test.

Industry dummies are included in all models.

In bold, significant coefficients

Standard error in brackets

*, **, *** respectively indicate significance levels at 10%, 5% and 1%

As a result of the Hausman test, a fixed effect model appears to be the most suitable methodology in all cases, so information regarding the results obtained through OLS and fixed effects methodologies are included.

The results of Model 1 and Model 3 show that transparency index on pay strategy to directors (PSVD) and total transparency index (ITR) are positively related to the directors’ compensation, confirming hypothesis 2 and rejecting hypothesis 1. So, in the case of study the effect of transparency on increasing competition in pay seems to prevail.

However, the level of voluntary disclosure on individual compensation received by directors (ICVD) not seems to significantly influence the level of pay. This behavior could be respond to the unwillingness of companies to disclosure this information until the publication of the new regulations on the matter.
5. CONCLUSIONS

The effect of voluntary disclosure on directors’ remuneration levels is ambiguous following the previous literature. So, two different types of relations have been described (positive and negative). Based on the arguments that support both positions, this paper analyzed empirically the relationship between the voluntary disclosure (ITR) and the level of directors’ compensation for 73 Egyptian companies during the period 2013–2018. According to the indexes set by the study, applicable to the Egyptian listed companies, the study designed two index, transparency index on pay strategy to directors (PSVD) and transparency index on individual compensation received by directors (ICVD).

The result are consistent with the hypothesis of effects of transparency on increasing competition in pay, so a positive relationship between voluntary disclosure on directors’ compensation and level of payment. So it is expected that previously more informed directors demand higher salaries in the Egyptian context. This fact is linked with the existence in Egypt of a very limited management market, in which many directors are part of the board of directors of several companies, forcing companies to offer higher retribution to attract and retain the competent directors.

Under these situations, is probable that similar levels of information in the future, which are required by the recent disclosure reforms laws, could avoid this situation and the salaries will tend to be more similar.

Finally, this study illustrates that disclosure leads to an increase in directors’ remuneration and give reason to regulators and investors, to be aware of the importance of this issue.
References


