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The effect of corporate social responsibility and board diversity on earnings management: Evidence from Jordanian listed firms

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The aim linked with the present article is to investigate the impact of corporate social responsibilities and board diversity on the earning management of the Jordanian listed firms. The top twelve trading listed firms have been selected from the Jordan stock exchange and data has been extracted from 2011 to 2020. The robust standard error along with the generalized method of moment (GMM) has been used for the analysis purpose. The results indicated that corporate social responsibilities and board diversity have a positive association with earning management of the Jordanian firm. These findings are suitable for the regulators while formulating policies on the corporate social responsibilities and earning management of the firm. These findings have guided the policymakers that they should enhance their focus on the corporate social responsibilities that enhance the earning management of the company. This study is also helpful for the new researcher while investigating this area in the future.

1. Introduction

With the passage of time, the increasing percentage of financial scams at the international level is a question mark on corporate management. The association of certified fraud examiner (ACFE) reported on fraud shows that there were 2504 fraud cases occurring in 125 countries during 2020. The total volume of loss in these 2504 cases stands at 3.6 billion. The median and average loss per case was 125,000 & 1.509 million dollars respectively. Such states urge the corporate world to review their policies, to protect their institution's management. This is one of the reasons that the literature on corporate management is increasing at a rapid pace. The structure of the corporate board also plays a vital role. Here transparency in the corporate sector is considered as the key element of success in the organization. The world is ensuring more efforts with the intention to avoid corporate financial scams.

The board is usually defined as the system empowered by the organization, to control and organize affairs (Al-Rahahleh, 2017; Enofe, Iyafekhe, & Eniola, 2017). The board of any organization gives directions, manages, and controls all the operations of the organization. All the policies, rules, and regulations of the organization are formulated with the approval of

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the board. Any decision of the board matters a lot for the organization. Every decision of the board strongly affects the entire organization. There are several aspects attached to the decisions of the board. All the stakeholders of the organization keenly observe the decisions given by the board. These are inclusive of internal as well as external supervisors. In the internal stakeholders, there are employees at all levels, vendors, etc. On the other hand, the external stakeholders are the shareholders, etc. These both strongly absorb the board decision effects. The board decides while keeping both of the stakeholders in the mind. The section of the board which will have the negative effect of the board decision will try to oppose the board. There is an association reported between corporate governance and financial embezzlement. Studies proposed that the fraud can be explained with the help of ownership and board 's characteristics (Chen, Firth, Gao, & Rui, 2006)

As the importance of the board's decision is vital for organizational success. The composition of the board is also an important decision in this process. Another concept rapidly increasing in the business world is the diversified board. With the passage of time, the corporate culture is promoting the diversified board concept. There are mixed results proposed in different studies regarding board diversity (Al-Rahahleh, 2017; Yasser & Al Mamun, 2016). Numerous research has investigated the effect of the presence of a female member on the board on multiple factors like decision making, generic firm performance, etc. (Green & Homroy, 2018). There are mixed results reported regarding the effect of the presence of a female member on the board on the different sections of the organization. Usually, studies proposed that there is a positive association reported between the presence of a female member on the board and the overall performance of the organization (Campbell & Mínguez-Vera, 2008). The studies also proposed that there is an increasing trend towards corporate social responsibility as witnessed in the case of the presence of a female member on the board (Bear, Rahman, & Post, 2010). On the other hand, there is a negative association reported between diversified boards and organization other matters like tax aggressiveness (Lanis, Richardson, & Taylor, 2017).

Firm size usually belongs to the system of internal control while companies having larger sizes have complex systems of internal control rather than smaller ones. There is the significance of capital structure dimensions that duly influences the various aspects of management such as the size of a firm on the management earnings. Various samples of firms are analyzed in the contextual relationship between earning management and corporate social responsibility (CSR). CSR is dominantly stated in the literature about the relationship that enumerated the significance of stakeholders which are more conscious about the investment decision (Wahyono, Novianto, & Putri, 2019). Usually, most of the stakeholders take into consideration the involvement of social activities that contributes to a larger era for investment returns. Through the implication of CSR, the stakeholders insert various measures to enable the success of the business through the incorporation of knowledge in corporate strategy. The literature widely recognized the significance of corporate strategy which is implemented while reminding the context of social activities through CSR (Liu & Lee, 2019; López-González, Martinez-Ferrero, & García-Meca, 2019). Due to the resource controls in the organization by stakeholders, decision policies are also considered as an essential element for the organizational existence. Social activities of firms are more inclined to enlarge the link between stakeholders rather than earning more short-term profits. Firms are more curious about their profits; therefore, the implication of CSR in firms that are social responsibility insert a dominant role in earning management (Mukhtaruddin, Relasari, Bambang, Irman, & Abu, 2014). Literature mentioned the eminence of CSR where several assumptions have been created in studies emphasizing the relationship with financial performance.

The implication of CSR in organizations is considered as a device for the effectiveness of using resources which further integrates the influences on financial performance. Some interpretations of CSR implications usually provide significant information to firms that help stakeholders and higher management to take effective decisions. The transparency of financial reporting could have adhered to the provided information to stakeholders for financial decisions (Biancone, Secinaro, & Brescia, 2016). Therefore, the existence of close connections occurs in the literature about the earning quality and activities of CSR, especially for meeting the stakeholder needs. Studies argued about the firm's social responsibility which is not primarily focused on the enhancement of profits but on building the links with stakeholders for the long-term perspectives. Rather than maximizing the short-term profits, socially responsible firms are admired to foster the long-run relation with stakeholders (Gras-Gil, Manzano, & Fernández, 2016; Liu & Lee, 2019). Firms usually look forward to self-benefits rather than focusing on a single context; therefore, the considerations are significant about earnings of shorter and larger levels. Studies rendered the viewing support about the relationship between earning management and corporate social responsibility with the demonstration of engagement levels (Siregar, 2018). Usually, firms that are robustly committed with corporate social responsibility engage less in management earnings. Many corporations are viewed from the perspective of CSR implications that inserted the features for the effective achievements in financial performance.

2. Review of Literature

The literature enumerated wide factors of CSR in the corporations of numerous countries denoted the negative implications toward the quality of financial information (Tariqa et al., 2020; Al-Hawary & Al-Khazaleh, 2020; Alhalalmeh et al., 2020). Studies significantly described the eminence of CSR practices which enumerated the relation among earning management from various aspects in firms. The mitigation or increases have been reviewed from the various contexts of earning management through the application of CSR. Literature elaborated on the significance of studies where the relationship of increment in earning management and CSR has never been documented nor tested globally (Hong & Andersen, 2011; Shafer, 2015). The types of earning management are widely discussed in literature while the types are further investigated from various contextual measures. Studies highlighted decreasing avoidance, earning losses, aggressiveness in earnings, and smooth earnings the dimensions of earning management and relationships are further elaborated in literature. It is dependent on the firms to elect the proxies that prevail between practices of CSR and earning management. The relationship is to be dependent on the type of considering management earnings between earning management and CSR. Studies widely contributed to the extent of CSR commitments that significantly endorses implications over the earning management through decreasing avoidance and aggressive earnings. The robust commitments toward CSR positively enumerated the significance of earning management where robustness significantly enhances earning aggressiveness. The implication of CSR usually argues for the transparency of management earnings and also reduces the management of numerous opportunities. Through joint measures, the higher accounting disclosure transparency in industries could reduce incentives for earning management. The diversion of CSR practices is positively inserting a role in the sustainability of firms from various perspectives but the mind of corporate social responsibility (CSR) has lesser interests toward the avoidance of earning decreases and losses.

Authors widely stated the relation among CSR and earning management where the different forms of earning management are viewed from the perspectives of activity-based and accrual-based (Scholtens & Kang, 2013). Further indicated the significance of CSR in the performance of firms but the lesser contributions in managing earnings. Many studies rendered the indication of CSR rating where the associations are determined with the quality of earnings having structures of different ownership. Studies interrupted the significance of manipulating earnings where numerous people demonstrated that earnings manipulations which are ethically objectionable strongly refer to stronger commitments in CSR. There is a negative relation between ratings of CSR and earning management levels where the firms are considered from aspects of sizes. Studies having a larger context of CSR and management earnings widely described the weakness of relationships between practices of CSR and quality of earnings. Some authors enumerated suggestions by indicating the dominance of CSR which is usually abused by the managers for saving their opportunistic behaviors (Jordaan, De Klerk, & de Villiers, 2018). It is usually known as the dominant term for the firms which render strategies itself; therefore, many managers use a variety of behaviors for the implication of CSR policies. The policies of CSR are implemented by some managers to the entrenchment of their strategies where the consistency of arguments is also placed in wide literature. Socially responsible firms restrain from adopting the undertakings of earning management while the reasons also underlie the social robustness of rendering unfavorable positions (Amar & Chakroun, 2018). Usually, socially responsible firms restrict the realization of unfavorable earnings; therefore, which further do not conduct earning management. Strong commitments of CSR inserts a vital role in the enhancement of a firm's performance from diversified aspects where strong CSR is also denoted as stronger strategies by firms.

Earning management is one of the vital factors in financial research. Due to the increasing trend of embezzlement in the world, its importance is increasing day by day. Earning management is defined as any action performed by an organization employee within the context of financial statements. The managers usually manipulate the financial statement. There is a detailed process that stands behind this process of earning management. The concept of earning management is getting more attention from the researchers with the passage of time. There is a strong bonding exist in the relationship between earning management and board diversity. Board diversity is part of corporate governance. Corporate governance is the concept of the modern world. This is researched a lot but still under the keen attention of the researchers. All around the globe transparency in corporate governance. The more the transparent the board is the less the chances of financial embezzlement will be there in the organization. The members of the organizations usually take the edge of weak corporate governance for financial embezzlement. The organization invests its maximum resources and efforts to strengthen the corporate governance of the organization. Not only nationally but internationally, the rules are under discussion to strengthen the board. It is usually considered that the presence of a female member on the board negatively affects the earning management (Allan, Kasim, Mustapha, & Shah, 2018). This will reduce the chances of fraud. Corporate governance is a basic tool to stop financial embezzlement. Earning management is the element of embezzlement. There is a mixed relationship reported between corporate governance different elements and earning management. It varies from negative to positive (Ahmad, Anjum, & Azeem, 2014). There are mixed results reported in the literature regarding corporate social responsibility and earning management. The studies also proposed that there is no association between corporate social responsibility and earning management (Wahyono et al., 2019). The intentions of the managers regarding earning management can be reduced with the help of proper corporate mechanisms. There is a strong association reported between corporate governance and earnings management. Multiple factors affect the controlling of earning management within the organization like leadership, culture, corporate governance, and other elements of the corporate governance like firm size, board size, governance mechanism etc.

The ultimate aim of any organization is to earn a profit. There are many factors attached to the organization who are keenly seeking the performance of the organization. As their interest is attached to the organization that's why they have serious concerns. These factors are called stakeholders. Stakeholders are those whose interest duty to any reason attached to the organization. One of the important factors is the shareholders of the organization. They are usually called the blood of the company. They show serious concerns due to their financial benefits. The profit of the organization is usually distributed to the shareholders in the form of dividends. The more the profit is, the more the dividend will be. Many of the times the organization with the help of their managers manipulates the financial statement of the organization. One of the reasons is to hide the real picture of the organization's profitability. It's necessary to mention here that the earning management is not a fraud. It's the accounting treatment of the organization to hide the profitability. But it varies organization to organization that how they consider this act of hiding the profitability (Allan et al., 2018).

There are multiple factors of corporate governance like firm size, board diversity, the board size, etc. There are mixed results reported regarding the relationship between these elements and the earning management. Some researchers stated that there is no relationship between different elements of corporate governance and earning management. On the other hand, the other researchers reported a positive association between some elements of corporate governance and the earning management (Murhadi, 2011; Swastika, 2013). The elements of the corporate governance i.e., namely board of directors and firm significantly explain the earning management. The studies also proposed that there is another term like agency problem that also results in earning management. The agency problem is the difference of opinion between managers and the external stakeholders of the company. Many of the times conflict badly affects the organization. Another factor of corporate governance like firm size also affects the earning movement. If the firm is not operating at a large level, it will not be under the pressure of the stakeholders as a comparison to that firm which is operating on a large scale. The firm operating at a large scale definitely will seek more the interests of the stakeholders specifically the investors. Another element of corporate governance is the board diversity. It is considered very important in this modern era. We are living in the developed world. The world has become a social village and the difference between the countries is a single click of a computer. This results in increasing the trend of women empowerment are also affecting the business world. The organizations are preferring the diversified board. In addition, board diversity along with CSR positively influenced the earning management of the firm. Past results reported in the literature regarding board diversity and earning management. The study conducted in Pakistan regarding the impact of gender diversity on earning management at the 100 listed organizations which are non-financial. The results of the study proposed that there is a negative association between the presence of the female C.E.O or director in the board and the containment of the earning management (Umer, Abbas, Hussain, & Naveed, 2020). In Malaysia, there was another study conducted on earning management and earning quality. The results of the study proposed that the elements like gender and age diversity have no significant effect on the earning management specifically in the Malaysian context (Hashim, Ahmed, & Huey, 2019).

Female member presence in the board is negatively linked with the earning management. The presence of the female member on the board throws different effects on different factors like tax aggressiveness, corporate social responsibility, and earning management. Further, the study also reported that not specifically the director but also the presence of female members as the CEO controls the earning management. Another factor explored in the study is that the first have more female members in the management and usually exercise a better quality of earning. Further, gender diversity also affects the stakeholder's confidence. Likewise, a positive association reported between the presence of the female member in the management and the firm value (Gavious, Segev, & Yosef, 2012). Another study conducted to test whether the female directorship and an audit committee with full independence can affect the earning management or not. Further, the reporting system of the firm is influenced by the female director. The results of the investigation proposed that there is no relationship between female directorship, audit committee, and earning management. (Sun, Liu, & Lan, 2011). Additionally, the study was conducted in France to check whether a gender diverse board explains or affects corporate social responsibility and earning management. The results of the study proposed that the female members on the board are usually more effective and plays a vital role to squeeze the earning management. Another factor explored in this study is that the presence of female members does not affect the strategy of earning management (Sial, Chunmei, & Khuong, 2019). The hypotheses derived from the above debate are:

H_1: *The corporate social responsibility has a positive relationship with earning management in the Jordanian listed firms.*

H_2: *The corporate board diversity has a positive relationship with earning management in the Jordanian listed firms.*

3. Data, Material, and Methods

The present article aims to examine the impact of corporate social responsibilities and board diversity on the earning management of the Jordanian listed firms. For this purpose, the top twelve trading listed firms have been selected from the Jordan stock exchange and data has been extracted from 2011 to 2020. The robust standard error along with the generalized method of moment (GMM) has been used for the analysis purpose. The rebuts standard error model has been selected due to the cross-sectional dependence of the data (Hoechle, 2007), the cross-sections (twelve firms) are more than the time series (2011-2020). In addition, the trend of standard errors is to be slightly optimistic, "their small-sample properties are considerably better than those of the alternative covariance estimators when cross-sectional dependence is present" (Hoechle, 2007).

Likewise, the GMM model has also been executed due to cross-section (twelve firms) dominance than the time series (2011-2020). One of the foremost conditions to execute the GMM model is that the cross-sections should be more than the time series (Nawaz, Yousaf, Hussain, & Riaz, 2020). In addition, the GMM model reliability depends on the suitability of the instrument adopted and the results show that the instrument is valid and could use the GMM model. Thus, this study develops the following equation:

$$\Delta DA_{it} = \sum\delta_j \Delta CSR_{i,t-j} + \sum\beta_j \Delta BD_{i,t-j} \sum\varphi_j \Delta ROA_{i,t-j} + \sum\omega_j \Delta LNTA_{i,t-j} + \alpha_1 \Delta DA_{i,t-1} + \mu_{it} \tag{1}$$

The variables that have been adopted by the present study include the corporate social responsibilities that are measured by calculating the ratio of "disclosure index of each company and the number of items for entity" (Ifada & Ghozali, 2020). The board diversity has been used as the predictor and measured as the ratio of the number of women board members to the total number of board members. In addition, the earning management has been measured by calculating the discretionary accruals that signify the magnitude of the Earning Management. The discretionary accruals have been calculated by subtracting the non-discretionary accruals from total accruals. While total accruals can be calculated by the following equation:

$$TA_t = \Delta CA_t - \Delta Cash_t - \Delta CL_t + \Delta DCL_t - DEP_t \quad (2)$$

where

TA: Total accruals in year *t*

ΔCA: Change in current assets in year *t*

$\Delta Cash$: Change in cash in year *t*

ΔCL: Change in current liabilities

ΔDCL: Change in debt including in current liabilities in year *t*

DEP: Depreciation and amortization expense in year *t*

In addition, non-discretionary accruals are calculated by the following equation:

$$NDA_t = \acute{\alpha}_1\left({}^{1}/_{At-1}\right) + \acute{\alpha}_2\left({}^{\Delta REV_t - \Delta REC_t}/_{At-1}\right) + \acute{\alpha}_3\left({}^{PPE_t}/_{At-1}\right) + \varepsilon \quad (3)$$

where

NDA: Non-discretionary accruals in year *t*

A_{t-1} : Total assets at the end of year *t-1*

ΔREV: Revenues in year t less revenue in year *t-1*

ΔREC: Net receivables in year t less net receivable in year *t-1*

ΔPPE: Gross property plant and equipment at the end of year *t*

DEP: Depreciation and amortization expense in year *t*

$\acute{\alpha}_1, \acute{\alpha}_2, \acute{\alpha}_3$: Firm-specific parameters

Thus, the discretionary accruals have been calculated by subtracting the non-discretionary accruals from total accruals that are calculated above. These are mentioned in the equation given below:

$$DA_t = TA_t - NDA_t \quad (4)$$

4. Findings

The outcomes include the descriptive statistics along with the correlation matrix, robust standard error model, and GMM model for hypothesis testing. Firstly, the results show the descriptive statistics that show the minimum, maximum, and average values along with standard deviation. The values of the descriptive statistics highlighted a total of 96 observations that is the combination of twelve listed firms and eight years from 2011 to 2020. In addition, mean values show the 1.658 average value of DA while the average values of CSR, BD, ROA, and LNTA are 1.203, 5.571, 15.576, and .157 respectively. Moreover, the values of standard deviation are very low such as only .445 values associated with DA while .154, .449, 13.381, and .214 values are linked with CSR, BD, ROA, and LNTA respectively. The minimum values are .463 in case of DA while .998 in case of CSR, 4.375 in case of BD, -35.15 in case of ROA and .001 in case of LNTA. Finally, the maximum values show that 2.509 associated with DA, 1.756 linked with CSR, 6.399 attached with BD, 45.33 associated with ROA, and .873 linked with LNTA. These values are mentioned in Table 1.

Table 1
Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
DA	96	1.658	.445	.463	2.509
CSR	96	1.203	.154	.998	1.756
BD	96	5.571	.449	4.375	6.399
ROA	96	15.576	13.381	-35.15	45.33
LNTA	96	.157	.214	.001	.873

The second outcome shows the correlation matrix that shows the relation among variables along with describing the multicollinearity assumption. The figures show that positive links exist among the CSR and DA, BD and DA, ROA and DA, and LNTA and DA. In addition, the values of the variables are less than 0.80 that shows no multicollinearity issue among the variables and proved the multicollinearity assumption as valid (Al-Nawafah et al., 2022; Alhalalmeh et al., 2022). These values are shown in Table 2.

Table 2
Correlation Matrix

Variables	**DA**	**CSR**	**BD**	**ROA**	**LNTA**
DA	1.000				
CSR	0.065	1.000			
BD	0.503	-0.477	1.000		
ROA	0.589	-0.133	0.532	1.000	
LNTA	0.294	-0.041	0.422	0.153	1.000

The third output shows the relationship among the variables and testing of hypotheses with the help of a robust standard error approach. The figures highlighted that CSR and BD have positive along with significantly linked with DA and accept H1 and H2 because the t-values are higher than 1.64 and p-values are less than 0.05 (Aityassine et al., 2021; Al-khawaldah et al., 2022). In addition, control variables such as ROA and LNTA also have positive and significant links with DA. These are shown in Table 3.

Table 3
Robust Standard Error

DA	**Beta**	**S.D.**	**t-statistics**	**P>t**
CSR	0.910	0.196	4.640	0.001
BD	0.404	0.050	8.050	0.000
ROA	0.013	0.003	4.840	0.001
LNTA	0.152	0.148	1.030	0.325
_cons	-1.922	0.418	-4.590	0.001

The fourth result also shows the relationship between the constructs and hypotheses testing with the help of the GMM model. The figures highlighted that CSR and BD are positive along with significantly linked with DA and accept H1 and H2 because the t-values are higher than 1.64 and p-values are less than 0.05. However, control variables such as ROA and LNTA have insignificantly linked with DA. These are shown in Table 4.

Table 4
Generalized Method of Moment (GMM)

DA	Beta	S.D.	t-value	p-value	Sig
CSR	1.096	.48	2.28	.041	*
BD	1.199	.225	5.34	0	***
ROA	.002	.004	0.46	.646	
LNTA	-.199	.616	-0.32	.748	

**** p<.01, ** p<.05, * p<.1*

5. Discussions and Conclusion

The results indicated that corporate social responsibilities and board diversity have a positive association with earning management of the Jordanian firm. These outcomes are the same as the outcomes of Ifada and Istiqomah (2020) who also examined that the social corporate responsibilities have positively influenced the earning management of the firm. In addition, a study by Uyagu and Dabor (2017) investigated that earning management depends on the effective social corporate responsibilities of the firm and this outcome is the same as the ongoing study findings. Moreover, a study by Wicaksana, Yuniasih, and Handayani (2017) examined that board diversity has also played a positive role in the earning management of the firm and this outcome is matched with the current study results. Finally, a study by Isa and Farouk (2018) analyzed that the earning management depends on the board diversity of the firm and this could be similar to the findings of the ongoing study. These findings are suitable for the regulators while formulating policies on the corporate social responsibilities and earning management of the firm. These findings have guided the policymakers that they should enhance their focus on the corporate social responsibilities that enhance the earning management of the company. This study is also helpful for the new researcher while investigating this area in the future.

The current study reaches the conclusion that the listed firm in Jordan has performed the effective social corporate responsibilities along with effective board diversity that is the reason for the high earning management of the listed firms in

Jordan. These findings have got the attention of the regulators that they should provide the focus on developing and implementing the effective policies related to the CSR and board diversity that enhance the earning management of the firm. This study suggested in the upcoming studies that there should be more companies such as non-listed companies to expand their scope of the study. These findings are suitable for the regulators while formulating policies on the corporate social responsibilities and earning management of the firm. In addition, the present study has recommended that future studies should execute other data analysis models than GMM and Robust standard error technique. Finally, the present study also suggested that the new studies should undertake the cross country analysis that is ignored by the present study.

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