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CORPORATE GOVERNANCE AND EARNINGS MANAGEMENT: EVIDENCE FROM LISTED FIRMS AT PALESTINE EXCHANGE

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(iD) **Naser Abdelkarim**[1+]
Khaled Zuriqi[2]

[1,2]Arab American University, Palestine.
[1]Email: naser.abdelkarim@aaup.edu

(+ Corresponding author)

ABSTRACT

The agency problem gives an incentive to present corporate governance codes that help reduce the conflict of interest between company owners and managers. This study used corporate governance indicators to assess the relationship between CG and earnings management. Managers use earnings management to overstate or understate the figures to serve their own interests. Data were collected for the 33 sampled companies in this study from the annual reports of the listed companies at the Palestine stock exchange. The modified cross-sectional Jones model was used to define the value of earnings management. The independent variables (CG indicators) were board independence, board size, ownership concentration, CEO duality, and audit quality. In addition, to control variables to account for differences in size and performance of the firm, these variables are company size, return on asset and leverage. By using the regression model, a significant correlation between EM and size for the year 2015 and between EM and ownership concentration, size and return on assets for the year 2016 were found. The overall regression result showed that the model fits with the variable used. The R-squared (coefficient of determination) values showed that approximately 65% and 73% of the variability of earnings management was accounted for by the variables in the model.

Contribution/ Originality: This study is one of very few studies to have investigated the relationship between corporate governance and earnings management practiced by Palestinian firms listed at the Palestine Stock Exchange. The findings of the study help explain this phenomenon in an emerging market, given the fact that the code of corporate governance is still relatively new and became effective in 2009.

1. INTRODUCTION

1.1. Background

Corporate governance refers to the set of guidelines, practices, and actions that set to make sure that the company managers work to achieve the goal of the firm and make sure that managers work to maximize shareholders' wealth in an ethical manner (What is Corporate Governance, 2017).

According to the organization for economic cooperation and development (OECD), corporate governance has six main principles: "1) Ensuring the basis for an effective corporate governance framework. 2) The rights and equitable treatment of shareholders and key ownership functions. 3) Institutional investors, stock markets, and other intermediaries; 4) The role of stakeholders. 5) Disclosure and transparency. 6) The responsibilities of the

board". These principles are used as a reference when assessing the corporate governance within the companies (OECD, 2015).

"The main spirit behind corporate governance is to confirm transparency and trustworthy relations between the corporation and its stakeholder" (Yadav *et al.*, 2017).

According to Gulzar and Wang (2011) earnings management is the modification of financial statements data by company managements to deceive stakeholders or to impact contractual decisions, by using selective Generally Accepted Accounting Principles (GAAP).

The relationship between corporate governance and earnings management is questionable: after reviewing many kinds of literature, the researcher could not find an agreement on the relationship between those variables. Since there is a difference in findings, some researchers found a positive relationship, others found a negative one and some found no relationship between corporate governance and earnings management.

This research is expected to fill the gap in the literature regarding corporate governance and earnings management in Palestine, given that there has been limited research addressing this important issue. Understanding this phenomenon will help improve the quality of financial information disclosed in periodic reports of Palestine Stock Exchange-listed firms.

1.2. Problem Statement

Managers tend to use earning management in order to meet their benchmarks (Rennekamp *et al.*, 2016) , or to mislead some stakeholders about the actual performance of the company or to influence contractual outcomes that depend on the performance reported in the financial statements (Healy and Wahlen, 1999). 52% of a sample of 26 listed companies in Palestine stock exchange were engaged in earnings management (Alareeni and Aljuaidi, 2014). However there is no prior research addressing the relationship between corporate governance and earnings management in Palestine (Abdelkarim and Amer, 2011). The aim of this qualitative study was to examine the relationship between corporate governance and earnings management in the case of Palestine stock exchange-listed companies. Empirical data for 33 out of 49 listed companies at Palestine stock exchange were analyzed to test the relationship between corporate governance and earnings management.

1.3. Purpose of the Study

This quantitative study described the relationship between corporate governance variables and earnings management. This quantitative study used the multiple regression model to test the relationship between those variables. The multiple regression was used because the data set of those variables is scale data and the purpose of this research was to conduct a relationship inquiry between those two variables. The study used corporate governance as the independent variable and earnings management as the dependent variable, in addition, to control variables to mitigate the size and performance differences effect on the findings.

By surveying and studying the characteristics of the board of directors and the level of earnings management of 33 out of 48 listed companies at Palestine Stock Exchange this study tested the relationship between corporate governance and earnings management among publicly traded companies in Palestine. The study figured out the best alternatives for the listed companies that should be an approach for practicing corporate governance to enhance transparency of financial information.

1.4. Significance of the Study

The significance of the study stemmed from the lack of literature on this topic in Palestine: there was no literature or research bar one study conducted by Abdelkarim and Amer (2011). To address the relationship between corporate governance and earnings management, this research aimed to provide new empirical evidence

for the relationship between corporate governance and earnings management in publicly traded companies in Palestine. One study is not sufficient to settle an important issue of high importance and relevance.

2. LITERATURE REVIEW

2.1. Corporate Governance in Palestine

The corporate governance theme in Palestine started in 2005 (Abdelkarim and Amer, 2011). Many educational programs were adapted to increase awareness about the dynamic rule of corporate governance. Three years later, Palestinian capital market authority (PCMA), the Palestinian Stock Exchange (PEX), and a number of related institutions have drafted the corporate governance code based on corporate governance principles released by the Organization for Economic Cooperation and Development (Abdelkarim and Amer, 2011).

The CG code is a requirement of all companies that operate under the PCMA (publicly traded companies) and the role of these codes is to improve performance, market reliability, and boost the investment wheel through increasing the market reliability. The code rules were derived from the laws and regulations used in Palestine, so companies are obligated by law to implement these codes. Due to the existence of codes that were compatible with the old companies' law, a list of recommendations and rules were added in an amendment to give the companies more flexibility in their form, size activates and management style (Committee Corporate Governance National, 2009).

2.2. Agency Theory and Corporate Governance

Entities were thirsty for the evolution of corporate governance to face the agency problem between the company owners (shareholders) and the company directors (Saltaji, 2013).

The agency relationship is defined as the relationship between any two parties in contractual agreement in which they agreed on providing a service from the agent (manager) to the principal (owner) and taking decisions and actions on the principal's behalf (Jensen and Meckling, 1976). The agency theory suggests that there is no alignment between the owners and the managers interest and so the conflict of interest arises from the goal of management to maximize their own capital and wealth while shareholders need to maximize the value of the firm by maximizing the value of its assets (Moldoveanu and Martin, 2001).

This agency problem arises from the separation of ownership from management and the theory suggests that the conflict of interest have three parties: shareholders, managers, and creditors (Saltaji, 2013).

2.3. Principles of Corporate Governance

Corporate governance is very important for the company's survival, growth and economic stability. The CG participates in bridging the gap between those that have an excess amount of money that they need to invest and those that have a shortage in money and need to borrow money in the market. These practices build confidence and reliability to stakeholders and stockholders that their rights and money are protected and safe. These practices help the companies to access funds overseas easily and with lower interest rates on their loans.

Because of this, there was a need to address a regulatory framework that supports corporate governance. In 1999 the Organization for Economic Cooperation and Development (OECD) issued the OECD principles, which have been modified and revised in 2003 and approved by OECD governments in April 2004. In 2015 the principles were reviewed again under the supervision of the OECD CG committee, the 35 member countries in OECD and all non OECD countries and G20 countries with participation from the Basel Committee on banking supervision, the financial stability board and the World Bank Group (OECD, 2015).

In April 2015 a draft of the principles was discussed by G20/OECD, and adopted by OECD countries on July 8, 2015, and the non-OECD countries the G20 countries submitted the principles on 15-16 November 2015 in the G20 meeting which were validated as G20/OECD Principles of corporate governance (OECD, 2015).

There are six main areas that were addressed by OECD principles: "I) Ensuring the basis for an effective corporate governance framework. II) The rights and equitable treatment of shareholders and key ownership functions. III) Institutional investors, stock markets, and other intermediaries. IV) The role of stakeholders; V) Disclosure and transparency. VI) The responsibilities of the board" (OECD, 2015).

2.4. Corporate Governance and Earnings Management

According to Healy and Wahlen (1999) earnings management is using the judgment and estimates in economic transactions that will affect the reported financial statements for two reasons: to mislead some stakeholders about the actual performance of the company or to influence contractual outcomes that depend on the performance reported in the financial statements (Healy and Wahlen, 1999).

Researchers have found two ways that managers can manage their earnings, either by accounting methods (FIFO, LIFO, depreciation method, useful life...) or by managing their accruals which uses skillful management techniques to avoid exposure from outsiders (DuCharme et al., 2001).

Many studies have been conducted to identify the relationship between corporate governance and earnings management by studying corporate governance characteristics. There is little research on corporate governance and its impact on companies' enactment and there is no prior research addressing the relationship between corporate governance and earnings management in Palestine (Abdelkarim and Amer, 2011).

According to Hu (2010) there is a relationship between corporate governance and discretionary accruals: he stated that the greater the corporate governance practices the lower size of discretionary accruals, meaning lower earnings management. The first study that addressed the relationship between corporate governance characteristics and earnings management in Palestine was in 2011 by two academics from Birzeit University, Dr. Naser Abdelkarem, and Leila Amer. The study addressed the relationship between the dependent variable, earnings management and board independence, board size, ownership concentration, CEO duality and audit quality as the independent variables. Earnings management was quantified by calculating discretionary accruals, using the Modified Cross-Sectional Jones Model (Abdelkarim and Amer, 2011). According to Dechow et al. (1995) as cited by Abdelkarim and Amer (2011) the Modified Cross-Sectional Jones Model is the best model used in detecting earnings management compared to other discretionary accrual models.

According to Al Saedi (2018) earnings management is used by the managers of the firm to meet specific goals in their favor. In his study that was conducted in 2018 to address the relationship between the earnings management practice by industrial listed companies in Qatar he found that these companies do not exercise earnings management in their financial reports due to the competitive and developed market in Qatar that makes companies achieve good earnings without the need to manipulate the figures. The research also focused on the importance of using the Modified Jones Model for measuring earnings management (Al Saedi, 2018).

Earnings management also used to avoid reporting losses as found by in research on Indian companies, by empirical testing where Indian companies use the earnings management to avoid reporting loss on the financial reports. The researcher used the change in working capital scaled to market value as measure of earnings management and another method was used to address the existence of earnings management is cash flow from operating activities scaled by beginning market value (Shette, 2018).

Real earnings management (REM) is defined as the change in the company operating policy to achieve a short term reporting target and this can be calculated by the difference between the cost of this firm with other competitors in the same industry cost (Srivastava, 2019)

2.5. Board Independence

Board independence refers to the number of non-executive board members who have the ability to make an independent judgment in areas that have a probable conflict of interest (Board Independence of Listed Companies, 2007).

There is an argument in the literature about the relationship between board independence and earnings management but according to Uadiale (2012) the greater the proportion of board independence the lower the likelihood of earnings management. This finding agreed with results found by Beasley (1996) and contradicted results found by Abdelkarim and Amer (2011) that showed a positive relationship between board independence and earnings management and the results found by Gulzar and Wang (2011) and results found by Hashim and Devi (2008) that showed no significant relationship between board independence and earnings management.

2.6. Board Size

Board size is identified by the number of board members, Empirical research has acknowledged that board size may be related to firm performance (Gulzar and Wang, 2011). According to Abdelkarim and Amer (2011) there is a negative correlation between board size and earnings management in 2009 and a positive relationship in 2010, Gulzar and Wang (2011) and Hashim and Devi (2008) found that there is no relationship between board size and earnings management.

2.7. Ownership Concentration

The overlap between ownership and control can mitigate any conflict of interest raised from agency problems which in turn will lead to an increase in the value of the firm (Man and Wong, 2013). According to Shleifer and Vishny (1997) the ownership concentration can boost the board-monitoring rule and some studies found a positive association between ownership and earnings management (Hashim and Devi, 2008). Abdelkarim and Amer (2011) found a negative association in 2010 results, and no association in 2009 results.

2.8. CEO Duality

CEO duality is defined as when a CEO of the company is the chairperson of the board of directors and a non-duality means a different person for CEO and another for the board of directors (Gulzar and Wang, 2011). There is a debate in the effect of CEO duality on earnings management; some studies suggest that CEO duality has no significant relationship with earnings management as found by Hashim and Devi (2008) and Abdelkarim and Amer (2011). Others found a positive association as found by Gulzar and Wang (2011) and the positive association found by Gulzar and Wang means if a person wears the hat of CEO and the chairperson of the board of directors the probability of manipulating the earnings will increase.

According to Singapore Code, provision 3.2 "The Chairman and CEO should be separate persons to ensure an appropriate balance of power, increased accountability, and greater capacity of the Board for independent decision-making" (Lin, 2019)

2.9. Audit Quality

One of the important factors that affects the reliability of financial information is audit quality (Yasar, 2013). Prior research focused on studying the relationship between audit quality factors like the existence of an audit committee, the experience of audit committee members and big four audited firms (Abdelkarim and Amer, 2011). According to Yasar (2013) the audit quality has no relationship with earnings management neither on big four audited firms nor on big four audited firms in Turkish firms (Gulzar and Wang, 2011) couldn't find enough evidence on the relationship between audit committee existence and earnings management, this finding is in consistence with Abdelkarim and Amer (2011) finding for 2010 analyzed data which found being audited by a big

four firm doesn't have an association with earnings management. However in testing the association for 2009 data (Abdelkarim and Amer, 2011) found a negative correlation between big four audited firms and earnings management, which means being audited by a big four company restricts the interact of earnings management (Abdelkarim and Amer, 2011).

Also, the audit committee is considered as one of the governance tools that promotes and increases the volume of disclosed financial information, leading to the reliability and transparency, and committing to the corporate governance principles (AL-Karasneh and Bataineh, 2018).

2.10. Research Hypothesis

2.10.1. The Research Key Hypothesis of this Study is:

H0: there is no significant relationship between corporate governance characteristics (board independence, board size, CEO duality, audit quality, ownership concentration controlled by the size, return on asset, leverage and earnings management).

H1: there is a significant relationship between corporate governance characteristics, (board independence, the board size, CEO duality, audit quality, ownership concentration controlled by the size, return on asset, leverage, and earnings management).

The following are five sub-hypotheses to be tested in the study

- $H_{1.1}$: There is a significant relationship between board independence and earnings management).
- $H_{1.2}$: There is a significant relationship between the board size and earnings management.
- $H_{1.3}$: There is a significant relationship between CEO duality and earnings management.
- $H_{1.4}$ There is a significant relationship between audit quality and earnings management.
- $H_{1.5}$:There is a significant relationship ownership concentration and earnings management.

3. METHODOLOGY

3.1. Sample and Data Collection

As the objective of this study was to determine the relationship between corporate governance characteristics and earnings management, the target population of this study was all the listed companies at the Palestine Stock Exchange. The total listed companies were 48 companies however the sample of 33 companies was analyzed as of December 31, 2015, and December 31, 2016, and the selected companies excluded the financial sector (banks and insurance companies) due to the existence of special governance regulations for this sector (Abdelkarim and Amer, 2011). In addition, the sample excluded another company that was suspended from trading.

The total number of listed companies in 2015 and 2016 were 48 companies and on Feb 20th, 2017 a new company (Sanad Construction Resources) was listed on the Palestine Stock Exchange, while another one was delisted in June 20th, 2017 since it transformed to a private trading company (The Arab Palestinian Shopping Centers, BRAVO) (Palestine Exchange News Archive, 2017).

The data were collected using empirical data from the annual report of 2015 and 2016 for the selected 33 companies. In addition to the annual reports, preliminary data were used for the Arab Real Estate Establishment Company for the year ending 31/12/2016, since there was no annual report disclosed for the date of the 26th of December 2017. The preliminary report for 2016 does not include any data about the ownership concentration so the percentages were used as the year ended on 31st of December 2015 to measure the earnings management and the corporate governance characteristics.

3.2. Conceptual Model and Variables of the Study

Corporate governance is a function of multiple factors as described below and all dependent and independent variables are summarized in Figure 1.

Own_Con: The cumulative percentage of shares held by block shareholders who own at least 5% of the firm's shares.
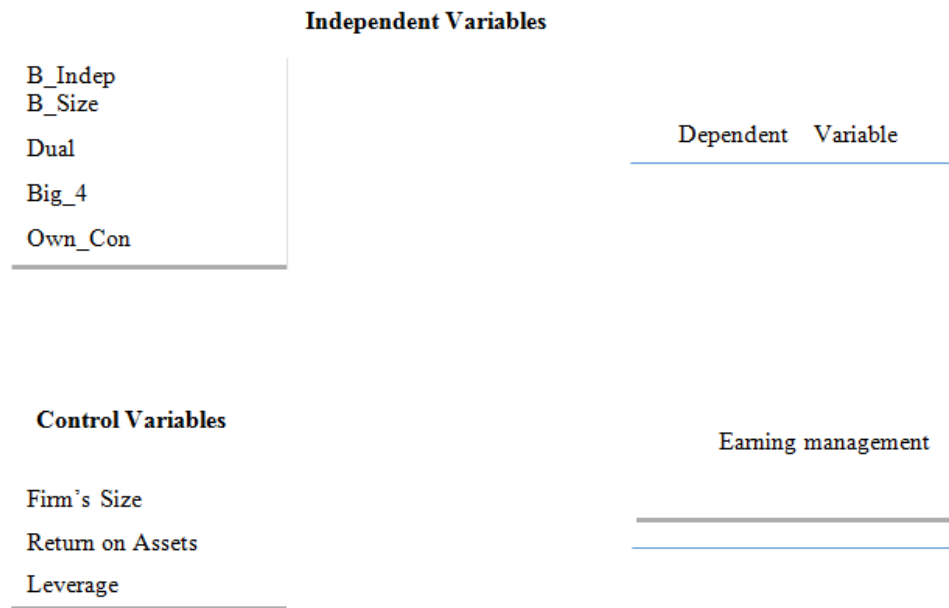
Independent Variables

B_Indep
B_Size

Dual

Big_4

Own_Con

Dependent   Variable

Control Variables

Firm's Size

Return on Assets

Leverage

Earning management

Figure-1. Variables of the study.

CG= f (B_Indep, B_Size, Dual, Big_4, Own_Con)

Where:

CG: Corporate governance: a function of 5 variables.

B_Indep: No of independent non-executive directors/total no. of board members.

B_Size: Board Size (measured as the total number of the board).

Dual: Dummy Variable known as CEO Duality (1 if duality exists, 0 otherwise).

Big_4: Dummy Variable known as Audited by Big 4 (1 if audited by Big 4 auditing firm, 0 otherwise).

3.3. Statistical Approach (Regression and Correlation Matrix)

According to Man and Wong (2013) there are four different models used to recognize earnings management. The first model is the discretionary model, using the Jones Model 1991, the second model is assets turnover (ATO)/profits margin (PM) diagnostic, the third model is earnings management proxies: classification shifting and the fourth model is earnings management proxies: restatements but the most used model in theories is the discretionary accruals model using the Jones Model (Man and Wong, 2013).

As mentioned earlier researchers found that one of the most skillful methods used in earnings management is managing company accruals. To calculate total accruals there are two methods used: the balance sheet approach and the cash flow statement approach and in this study the cash flow statement approach was used, since it was the approach most preferred by researchers when comparing the two methods (Ali Shah *et al.*, 2009).

The research used absolute discretionary accruals to measure the earning management in the targeted companies and the absolute discretionary accruals value was calculated using the following formulas:

Total accruals were calculated in this approach using the following equation:

$$TAc_t = N.I_t - CFO_t$$

Where:

TAc_t: is total accruals in year t.

$N.I_t$: is Net Income or Earnings before extraordinary items in year t.

CFO_t: is cash flows from operating activities in year t.

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In this research the cross-sectional Modified-Jones model was used to measure earnings management as in this model all variables are scaled to begging total asset as follows:

$$\frac{TAc_{i,t}}{A_{i,t-1}} = \alpha_0 \left(\frac{1}{A_{i,t-1}}\right) + \alpha_1 \left(\frac{\Delta REV_{i,t}}{A_{i,t-1}}\right) + \alpha_2 \left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) + \varepsilon_{i,t} \qquad (1)$$

Where:

$TAc_{i,t}$ = Total Accruals for the company i in year t (measured as the difference between earnings before extraordinary items and cash flows from operations).

$A_{i,t-1}$ = Total assets for the company i in year t.

$\Delta REV_{i,t}$ = Change in net sales for the company i in year t.

$PPE_{i,t}$ = Gross property, plant and equipment for the company i in year t.

$\varepsilon_{i,t}$ = the regression error terms, assumed cross-sectional uncorrelated and normally distributed with mean zero.

After regressing total accruals that have been calculated in cash flow method lagged by total assets to revenue and property planet and equipment also lagged to total asset, the calculated coefficients **α_0**, **α_1**, and **α_2** were used to calculate the discretionary accruals using the following equation:

$$NDA_t = \alpha_0 \left(\frac{1}{A_{i,t-1}}\right) + \alpha_1 \left(\frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}}\right) + \alpha_2 \left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) \qquad (2)$$

Where

α_0, α_1, and α_2 = the fitted coefficients from Equation 1.

NDA_t is non-discretionary accruals.

The use of change in receivable is the modification made to the original Jones Model 1991 and this modification was done by Dechow *et al.* (1995) since they believed the receivables must not be included in the calculation of nondiscretionary accruals and they modified the model because the management may manage its credit sales (Man and Wong, 2013).

Then the discretionary accrual components were calculated using the following equation since the discretionary accruals are the difference between total accrual and non-discretionary accruals.

$$\left| DAc_{i,t} \right| = \frac{TAc_{i,t}}{A_{i,t-1}} - NDA_t$$

Where:

$\left| DAc_{i,t} \right|$ = absolute value of the managed component of total accruals for sample company i in year t.

The research applied the multiple regression model to test the research hypothesis:H0: there is no relationship between corporate governance characteristics (board independence, board size, CEO duality, Audit quality, ownership concentration controlled by the size, return on asset, leverage and earnings management).

H1: there is a relationship between corporate governance characteristics, (board independence, the board size, CEO duality, Audit quality, ownership concentration controlled by the size, return on asset, leverage, and earnings management).

The absolute value of discretionary accruals was used as a dependent variable for earnings management measurement. Considering the Corporate Governance Five principles below as independent variables in the regression model :

$\left| DA_t \right| = \alpha + \beta_1 B\_Indep + \beta_2 B\_Size + \beta_3 Dual + \beta_4 Big\_4 + \beta_5 Own\_Con + Size + ROA + Leverage + \varepsilon_{i,t}$

Where:

Dependent variable.

DA_t: Absolute Discretionary Accruals (a measure of earnings management).

Independent variable.

B_Indep: No of independent non-executive directors/total no. of board members.

B_Size: Board Size (measured as the total number of the board).

Dual: Dummy Variable known as CEO Duality (1 if duality exists, 0 otherwise).

Big_4: Dummy Variable known as Audited by Big 4 (1 if audited by Big 4 auditing firm, 0 otherwise).

Own_Con: the cumulative percentage of shares held by block shareholders who own at least 5% of the firm's shares.

Control Variables.

Size: Natural Logarithm of Total Assets.

ROA: Net Income before Extraordinary Items scaled by lagged total assets.

Leverage: Ratio of total debt to total assets.

The use of control variables according to Gulzar and Wang (2011) was due to the helpful rule of these variables in reducing the level of earnings management; these variables affect the decision of the firm to enroll in earnings management.

4. EMPIRICAL FINDINGS

This section presents the empirical findings of the study. Table 1 presents the values of the non-discretionary accruals components in the 2 years of testing.

Table-1. Non-Discretionary accruals components values.

Coefficients			
	Year	2015	2016
$\alpha 0$	1 / Total assets t-1	80,9313.39	1,567,965.51
$\alpha 1$	(change in REVi,t- change in AR,t) / Assets t-1	0.408	0.318028
$\alpha 2$	Gross Property Plant and Equipment Year t / Total Assets, t-1	-0.053924	-0.119648

By running a liner regression for the following equation, $\frac{TAci,t}{Ai,t-1} = \alpha_0 \left(\frac{1}{Ai,t-1}\right) + \alpha_1 \left(\frac{\Delta REVi,t}{Ai,t-1}\right) + \alpha_2 \left(\frac{PPEi,t}{Ai,t-1}\right) + \varepsilon_{i,t}$

the researcher calculated the needed coefficients to be used in Equation 2.

The first part of the equation represents the non-discretionary accruals and the second part which is $\varepsilon_{i,t}$ is the discretionary accruals figure that used as the dependent variable of the study, this figure is calculated as follow:

$$| DAc_{i,t} | = \frac{TAci,t}{Ai,t-1} - \left(\alpha_0 \left(\frac{1}{Ai,t-1}\right) + \alpha_1 \left(\frac{\Delta REVi,t - \Delta RECi,t}{Ai,t-1}\right) + \alpha_2 \left(\frac{PPEi,t}{Ai,t-1}\right)\right)$$

4.1. Descriptive Statistics

The table below presents the descriptive statistics of research model variables.

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Table-2. Descriptive statistics.

Variable	2015			2016		
	Minimum	Maximum	Mean	Minimum	Maximum	Mean
DAcit	0.0008	0.5920	0.1326	0.0012	1.4699	0.1969
B_Indep	0.71	1.00	0.93	0.73	1.00	0.94
B_Size	5	15	8.73	5	15	8.48
Dual	0	1	.18	0	1	.18
BIG_4	0	1	.70	0	1	.67
Own_Con	0.000	0.913	0.572	0.000	0.925	0.586
Size	13.71	20.53	16.9533	13.51	20.74	16.96
ROA	-32.16%	21.87%	1.61%	-78.79%	21.44%	0.852%
Leverage	1.66%	56.71%	27.76%	1.76%	54.68%	28.71%
CEO Duality, 2015, 2016			**BIG 4 Auditing, 2015**		**BIG 4 Auditing Firm, 2016**	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
NO	27	82%	10	30.0	11	33%
Yes	6	18%	23	70.0	22	67%
Total	33	100.0	33	100.0	33	100.0
B_INDEB	**Frequency**			**Percent**		
Other	15			45.5		
100% Indep	18			54.5		
Total	33			100.0		

In Table 2 statistics show the following:

4.2. Discretionary Accruals

The mean value of the discretionary accruals was 0.1326 and 0.1969 for the years 2015 and 2016 respectively with a minimum value of 0.0008 and 0.0012, and a maximum value of 0.5920 and 1.4699 for the years 2015 and 2016 respectively. Discretionary accruals are the abnormal level of accruals and this measure was used as the indicator of earnings management. A higher level of discretionary accruals indicated a higher potential earnings management, but results can't be certain that earnings management exists from the number itself. Further investigation is required to make a judgment for the use of earnings management.

4.2.1. Board Independency

About 54.5% of the sample companies were 100% independent for the years 2015 and 2016, the other 45.5% were not completely independent, Considering that board independency is calculated as (Independence board members over the total board members), the mean values were 93% and 94% for the years 2015 and 2016 respectively. Board independence is required by the code of corporate governance in Palestine with at least two independent members within the board. These figures indicated that the listed companies were abiding by the code regulations.

The board size had different levels with a minimum board size of 5 and a maximum of 15 members for the years 2015 and 2016. Based on the average board size which was 8.73 in 2015 and 8.48 in 2016, the percentage of independency regarding the Palestine code of corporate governance should have been 22.9% in 2015 and 23.5% in 2016 while the actual results showed 93% and 94% in both years respectively which was clarified by the board size

4.2.2. CEO Duality

The code of corporate governance in Palestine stated that it's preferable to not have any executives in the board or the board management for better accountability, but the actual results were that 18% of companies have CEO duality, for both years, where the board director was the CEO of the firm.

4.2.3. Audit Quality

The results showed that about 70% and 67% for the years 2015 and 2016 respectively of the targeted companies were audited by a big four auditing firm.

4.2.4. Ownership Concentration

On average, the ownership concentration was 57% for the year 2015, and 59% for the year 2016, and a 0% meant that the company ownership was completely dispersed between shareholders.

1. The profitability figure, ROA values ranged from minimum value of about -32% to a maximum value of 22% with a mean value of 1.61% for the year 2015, and from a minimum value of about -79% to a maximum value of 21%, with a mean value of 0.852% for the year of 2016.

2. The financial leverage of the company which indicated the percentage of total debt to total asset ranged from a minimum value of 1.66% and 1.76% for the year 2015 and 2016 respectively and a maximum value of 56.71% and 54.68%, with a mean value of 27.7% and 28.71 for the years 2015 and 2016 respectively.

4.3. Multivariate Analysis

Before analyzing the data using the linear regression model, a test for the multi-collinearity was done. Multi-collinearity is defined as the existence of high correlation between the independent factors under study, Statistics Solutions Testing of Assumptions (2018) and the following tables show the correlation between the factors of the study using the person correlation matrix.

Table-3. Correlation matrix for the year 2015.

Correlations 2015		B_Size	Dual	BIG4	Own_Con	Size	ROA	Leverage	B_Indep	DAcit
B_Size	Pearson Correlation	1								
	Sig. (2-tailed)									
Dual	Pearson Correlation	0.021	1							
	Sig. (2-tailed)	0.909								
BIG4	Pearson Correlation	0.335	-0.031	1						
	Sig. (2-tailed)	0.057	0.864							
Own_Con	Pearson Correlation	0.012	-0.231	0.480**	1					
	Sig. (2-tailed)	0.946	0.196	0.005						
Size	Pearson Correlation	0.486**	0.210	0.418*	0.122	1				
	Sig. (2-tailed)	0.004	0.241	0.015	0.498					
ROA	Pearson Correlation	0.037	-0.026	-0.085	-0.036	0.332	1			
	Sig. (2-tailed)	0.837	0.888	0.637	0.843	0.059				
Leverage	Pearson Correlation	0.026	0.164	0.122	0.067	0.027	-0.401*	1		
	Sig. (2-tailed)	0.884	0.363	0.499	0.712	0.881	0.021			
B_Indep	Pearson Correlation	-0.037	-0.747**	0.006	0.191	-0.278	-0.125	0.237	1	
	Sig. (2-tailed)	0.839	0.000	0.974	0.288	0.117	0.489	0.185		
DAcit	Pearson Correlation	-0.371*	-0.330	-0.237	-0.147	-0.733**	-0.384*	0.153	0.420*	1
	Sig. (2-tailed)	0.033	0.061	0.184	0.414	0.000	0.027	0.396	0.015	

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table-4. Correlation matrix for the year 2016.

Correlations 2016		B_Indep	B_Size	Dual	BIG4	Own_Con	Size	ROA	Leverage	DAcit
B_Indep	Pearson Correlation	1								
	Sig. (2-tailed)									
B_Size	Pearson Correlation	- 0.16	1							
	Sig. (2-tailed)	0.375								
Dual	Pearson Correlation	-0.683**	0.103	1						
	Sig. (2-tailed)	0.000	0.569							
BIG4	Pearson Correlation	0.074	0.254	0.000	1					
	Sig. (2-tailed)	0.682	0.154	1						
Own_Con	Pearson Correlation	0.161	-0.045	-0.264	0.441	1				
	Sig. (2-tailed)	0.371	0.804	0.138	0.01					
Size	Pearson Correlation	-0.271	0.532**	0.218	0.426*	0.081	1			
	Sig. (2-tailed)	0.127	0.001	0.223	0.013	0.655				
ROA	Pearson Correlation	-0.093	0.034	0.017	-0.143	-0.142	0.276	1		
	Sig. (2-tailed)	0.609	0.852	0.925	0.429	0.43	0.12			
Leverage	Pearson Correlation	0.212	0.009	0.141	0.2	-0.042	0.051	-0.296	1	
	Sig. (2-tailed)	0.237	0.959	0.433	0.265	0.815	0.78	0.095		
DAcit	Pearson Correlation	0.301	-0.378*	-0.205	-0.18	-0.162	-0.699**	-.585**	0.216	1
	Sig. (2-tailed)	0.088	0.03	0.253	0.315	0.367	0.000	0.000	0.228	

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

By analyzing the above Table 3 and Table 4 a significant correlation can be found between some independent variables but the highest correlation was between CEO duality and board independence, with a correlation value of - 0.747 and -0.683 for the years 2015 and 2016 respectively. To make sure that collinearity exists the variance inflation factor in the regression model for both years were tested. According to Akinwande *et al.* (2015) if the value of VIF is greater than 5 this represents collinearity between variables. The Table 6 results showed that the highest value for VIF was 3.445 and 2.466 for the board independence variable and since no value was greater than 5 there was no collinearity between the study variables.

The regression model was used to test the correlation normality test for data (Ghasemi and Zahediasl, 2012).

Table-5. Normality test.

One-Sample Kolmogorov-Smirnov Test, Normality Test		DAcit , 2015	DAcit , 2016
N		33	33
Normal Parameters [a,b]	Mean	13.2564%	19.684848%
	Std. Deviation	14.23498%	34.7949776%
Most Extreme Differences	Absolute	.177	.311
	Positive	.170	.311
	Negative	-.177	-.287
Test Statistic		.177	.311
Asymp. Sig. (2-tailed)		.010[c]	.000[c]

Source: Normality test results.

The above Table 5 showed the normality test using One-Sample Kolmogorov-Smirnov test for both the years 2015 and 2016 with the hypothesis for the normality test as follows:

H₀: The sampled population is not normally distributed.

H₁: The sampled population is normally distributed.

From the table above the findings showed that the P-value for the K-S test was lower than the 5% alpha level, so the null hypothesis was accepted for both years, and it was concluded that the data were not normally distributed. The assumption of normality was not met, but according to Ghasemi and Zahediasl (2012) normality violation for sample sizes larger than 30 will not cause any problems and the parametric test can still be used. He

also added that data that have a sample size greater than 30 tend to be normally distributed regardless of the data distribution shape, so the research used the parametric test since the sample size was 33 listed companies.

4.4. Regression Findings

Table-6. Regression Results.

	2015			2016		
Model	**R**	**R Square**	**Durbin-Watson**	**R**	**R Square**	**Durbin-Watson**
1	.809a	.654	1.684	0.856a	.733	1.859

Source: Regression Model.

Table 6 represents the results of the multivariate regression model, in order to measure the explanatory power of corporate governance variables (independent variables) against the discretionary accruals (dependent variable) that represent the earning management measurement.

The R-value (coefficient of correlation) was 0.809 and 0.856 for the years 2015 and 2016 respectively, and indicated that there is a strong direct leaner relationship between the discretionary accruals (dependent variable) and the corporate governance parameters, (independent variables), B_Indep, B_Size, Dual, Big4, Own_Con, Size, ROA and Leverage.

The R-squared (coefficient of determination) in Table 6 was 0.654 and 0.733 for the years 2015 and 2016 respectively, meaning that approximately 65% and 73% of the variability of earnings management was accounted for by the variables in the model, for the years 2015 and 2016 respectively, which means that the independent variables that represent corporate governance reliably predicted the dependent variable (Discretionary accruals).

In Table 6 we found that, the Durban-Watson test value was 1.684 and 1.859 for the years 2015 and 2016 respectively. The Durban-Watson test is used for measuring the autocorrelation in the regression residuals; the autocorrelation can lead to underestimating the standard error and can cause a predictor to show as significant when it is not significant. This value showed that there was no serial correlation since the values were less than 3 and more than 1, Field (2009) suggests that values under 1 or more than 3 are a definite cause for concern.

Table-7. Model fit.

	2015			2016		
Model	**Df**	**F**	**Sig.**	**df**	**F**	**Sig.**
Regression	8	5.665	.000b	8	8.233	.000b
Residual	24			24		
Total	32			32		

b. Predictors: (Constant), B_Indep, B_Size, Dual, BIG4, Own_Con, Size, ROA, Leverage.

Table 7 shows the result for the fit of this model for the Palestinian case where the F-test value was 5.665 and 8.233 with a P-value of less than 0.001 for the years 2015 and 2016 respectively. Since the P-value was less than alpha level (0.05), we concluded that the model fits the data for the Palestinian listed companies. The P-value of the F-test also indicates if the overall model is significant. With a p-value of zero to three decimal places, the overall model was statistically significant at alpha level of 1%, so we could say that the group of variables B_Indep, B_Size, Dual, BIG4, Own_Con, Size, ROA and Leverage can be used to reliably predict Dac (the dependent variable).

Table 7 represents the significance level between the dependent variable Dac and the independent variables.

- The test statistic value for board independence variable was .371 and 0.122 with a P-value of 0.714 and 0.904 for the years 2015 and 2016 respectively, so we concluded that there was no statistical significance between the Dac and the board independence for both years since P-value was higher than alpha level. This result is consistent with Gulzar and Wang (2011); Chtourou *et al.* (2001); Hashim and Devi (2008) and Abdul and Mohamed (2006) and contrasts with the results found by Klein (2002); Xie *et al.* (2003) and Mansor *et al.* (2013)

where independent directors were positively related to DAC. The coefficient value of the B_Indep was 0.001 and 0.089 for the years 2015 and 2016. The positive direction of the coefficient in findings raises doubt as to whether independent directors in Palestinian firms are truly independent (Abdelkarim and Amer, 2011).

According to Omoye (2014) the positive direction of the relation between earnings management and board independents is due to that independent directors tend to increase firm profitability to get steady compensation.

- Board size: the test statistic value for board size variable was -0.741 and -0.886 with a P-value of 0.466 and 0.384 for the years 2015 and 2016 respectively. From these figures we concluded that there was no statistical significance between the Dac and the board size for both years since P-value was higher than alpha level. The coefficient value of the B_Size was -0.006 and -1.645 for the years 2015 and 2016, which means a one-unit increase in the B_Size will cause the Dac to be 0.006 and 1.645 lower for the years 2015 and 2016. This finding is consistent with Omoye (2014) and Abbott *et al.* (2000) while it's in contrast with Gulzar and Wang (2011); Mansor *et al.* (2013); Xie *et al.* (2003) and Abdelkarim and Amer (2011). The coefficient of B_Size negative direction is inconsistent with Xie *et al.* (2003); Abdelkarim and Amer (2011) and this finding illustrated that a larger board is more likely to be controlled by CEO's and less likely to be effectively functioned (Jensen, 1993).

- CEO duality: the test statistic value for CEO duality variable was -0.966 and -0.902 with a P-value of 0.343 and 0.376 for the years 2015 and 2016 respectively, since P-value was higher than alpha level 5%, we concluded that there was no statistical significance between discretionary accruals and the CEO duality. The findings showed that the separation between the chair of the board of directors and CEO position does not affect earnings management in the Palestinian listed companies. This result is consistent with Abdullah and Mohd (2004); Abdul and Mohamed (2006); Abdelkarim and Amer (2011) and Hashim and Devi (2008) and in contrast with Klein (2002) and Gulzar and Wang (2011) who found a significant positive relationship between these variables. The explanation of the significant relation is that the separation could allow transparent business and increase the level of accountability within the company. The relation between Dac and Dual was negatively associated with a negative coefficient with the value of -0.076 and -12.998 for the years 2015 and 2016 respectively, the negative coefficient indicates that as duality decreases this will increase EM practices.

- Audit quality: this variable was a dummy variable with the Big 4 auditing firm as the indicator for the audit quality. If the firm is audited by a big four company or others, the test statistics value for this variable were 0.723 and 0.727 with a P-value of 0.476 and 0.474 for the years 2015 and 2016 respectively, for this variable fail to reject the null hypotheses, so can say there was no significant correlation between Big_4 and Dac. The positive coefficient indicated the positive direction of the variable change impact, with a coefficient value of 0.035 and 7.354 for the years 2015 and 2016 respectively. This finding is consistent with Yasar (2013); Chtourou *et al.* (2001) and with Abdelkarim and Amer (2011) for the test in 2010 and in contrast with Abdelkarim and Amer (2011) for the year of 2009 and in contrast with Mansor *et al.* (2013) who stated that the presence of qualified auditor can prevent the auditee from practicing earnings management.

- Ownership concentration: the distribution of ownership between the shareholders were another factor that was tested. In 2015 the test statistic value was -1.422 with P-value 0.168 which was larger than 5% alpha level so we failed to reject the null hypothesis, and we can say that there was no statistical correlation between ownership concentration and the earnings management for the year 2015. This finding is consistent with Bowen *et al.* (2008); Abdul and Mohamed (2006) disagreed with the test statistic value for 2016 were -2.126 with a P-value 0.044 which is less than 5% alpha level. so we reject the null hypothesis and we find a statistical significance between the ownership concentration and the earnings management for the year 2016. The coefficient for 2016 was negatively associated with the Dac variable (the dependent variable), with a value of -0.377, and the negative association showed that the more concentrated the ownership the more effective the management in restring the earnings management as presented by Abdelkarim and Amer (2011). This finding was also consistent with Shleifer and Vishny (1997) who found concentrated ownership can increase the

monitoring effectiveness. The agency theory also stated that a less concentrated company may have an incentive to manipulate and manage company earnings by the managers to achieve their personal benefits. In another study, Gulzar and Wang (2011) have found a significant but positive correlation between discretionary accruals and ownership concentration.

The control variables showed different findings and according to Becker et al. (1998) the size of the firm may affect the characteristics of board and the audit committee, in addition to the level of earnings management, the size variable has t-value of -3.506 and -3.326 with a P-value of 0.002 and 0.003 for the years 2015 and 2016 respectively, we must reject the null hypotheses and conclude that there is a significant correlation between the earnings management indicator Dac and the control variable size for both years, this result is consistent with Yasar (2013) this negative relation is consistent with Mansor et al. (2013); Abdelkarim and Amer (2011) this finding is explained as firm size increases earnings management decreases, this decrease explained by Mansor et al. (2013) that smaller companies actions may not be examined, on the other hand larger companies have more constraints and controls that restrain them from practicing earnings management (Abdelkarim and Amer, 2011). Others find that size is positively related to earnings management, due to the political cost, as company size increases the government examination on the larger firms, so they tend to lower their earrings to not have any political costs, Abdullah and Mohd (2004). Also, this finding is in contrast with Gulzar and Wang (2011) who found no significant relation between DAC and firm size.

From Table 4, the value of the test statistic for the ROA figure was -0.792 and -3.494 with a P-value of 0.436 and 0.002 for the years 2015 and 2016 respectively and since the P-value for 2015 was greater than the alpha level 5%, we concluded that there was no significant correlation between ROA and Dac for the year 2015. This finding is in contrast with Abdelkarim and Amer (2011) who found a positive significant correlation within Palestine Stock Exchange-listed companies, and in contrast with Becker et al. (1998) and Saleh et al. (2005) the positive correlation between ROA and Dac according to Abdelkarim and Amer (2011) that higher performance companies are more vulnerable to engage in earnings management.

In 2016 the P-value of the ROA variable was 0.002 which was less than 5%, so we rejected the null hypothesis and concluded that there was a significant negative correlation between Dac and ROA for 2016. This finding is consistent with Abdelkarim and Amer (2011); Mansor et al. (2013) and Gulzar and Wang (2011) who found a correlation between ROA and Dac, but unlike Abdelkarim and Amer (2011) and Mansor et al. (2013) we found a negative correlation. This finding is consistent with Gulzar and Wang (2011) who found a negative correlation between ROA and Dac within Chinese listed companies. The explanation for this finding is that the lower the company profits the higher the company to engage in earnings management, either to reflect a positive image of the company position or to shrink the negative image on the company performance Saleh et al. (2005).

Another correlation between the control variable leverage and the dependent variable the Dac showed that there was no significant correlation between the leverage and Dac (Table 6). The coefficient of this variable were 0.001 and 0.199 with a P-value of 0.396 and 0.437 (higher than 5%), for the year 2015 and 2016 respectively and this finding is consistent with Gulzar and Wang (2011) and in contrast with Saleh et al. (2005) and Abdelkarim and Amer (2011) who found a positive significant correlation between discretionary accruals and leverage level. The coefficient for the leverage variable was positive and this was supported by the theory that as the leverage increases (higher debt) the company is more vulnerable for debt covenant violation, which means a higher incentive for engaging in earnings management. Saleh et al. (2005); Becker et al. (1998) stated that companies with a high level of debt have an incentive for income increasing earnings management.

5. CONCLUSIONS AND FURTHER RESEARCH

Based on the research empirical finding using the correlations and the regression analysis to test the research hypotheses, the results are summarized as follows:

- All sub hypotheses H 1.1 , H1.2 , H1.3 , H1.4 and H 1.5 were rejected and there was no significant relationship between the corporate governance characteristics (board independence, the board size, CEO duality, audit quality, ownership concentration controlled by the size, return on asset, leverage) and earnings management represented by the discretionary accruals. The main null hypothesis was accepted.

- The relationship between corporate governance (CG) and earning management (EM) controlled by some company indicators (Size, ROA and Leverage) was empirically examined. Earnings management measured by the discretionary accruals and the corporate governance indicators in addition to control variables that influence governance and on earnings management.

- The tested variables for corporate governance were, board independence, the board size, CEO duality, audit quality, and ownership concentration. The control variables were the firm size, return on asset and financial leverage. The relation between these variables was tested using the linear regression model by using the discretionary accruals as the dependent variable and all the aforementioned variables as the independent variable.

- The discretionary accruals were calculated by using the Modified Jones Model, and the given number was regressed again to test the relation between earnings management and corporate governance. The used model fitted with the variables used since the P-value of ANNOVA test in the regression model was less than alpha level 5%.

In summary, the research hypotheses were rejected and the main null hypothesis was accepted as the research found that there was no significant correlation between the CG independent variables used and the earning management represented by the Discretionary accrual as dependent variable, in Palestine Exchange listed companies (Non-Financial sector).

Based on the research results, the recommendations are as follows:

- More studies and research should be conducted on corporate governance and the earning management that consider more than two years of historical information.

- The same study could be implemented on the financial sector including the banking and Insurance sectors, to find the relationship between the corporate governance and earning management, considering that these sectors are regulated by the Palestine Monetary Authority (PMA) and Palestine Capital Market Authority (PMA)in a way that such sector companies are more liable to apply corporate governance principles.

- The Corporate Governance code in Palestine with all the principles should be complied with by all companies to enhance transparency, trustworthiness and actual financial performance and have a positive impact on the Palestine Stock Exchange performance.

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