

The Effect of Debts Structure and Capital Cost of Algerian Companies on Earnings Management

أثر هيكل الديون وتكلفة التمويل للشركات الجزائرية في إدارة الأرباح

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Abstract:

The aim of this paper is to examine the effect of some financial characteristics (long term debts, short term debts, and capital cost) on earnings management. The study employed 193 observations that concern 25 Algerian companies during 2007-2019, based on multiple regression.

According to the results, long term debts and short term debts do not affect earnings management in Algerian companies. This can be explained by the difficulty to attract users' attention through earnings management in a way to cover the fact of financial structure, and the absence of a direct relationship of financial structure with earnings. Contrarily, the capital cost affects positively the earnings management, due to the importance of capital cost as a criterion for financial and investment decisions, and the existence of a direct relationship between the capital cost and earnings.

Keywords: Earnings management; Long term debts; Short term debts; Capital cost; Algerian companies.

JEL Classification Codes: M40, M41

ملخص:

هدف هذه الدراسة هو استكشاف أثر بعض الخصائص المالية (الديون طويلة الأجل، الديون قصيرة الأجل، تكلفة التمويل) في إدارة الأرباح. ومن أجل ذلك تم استخدام 193 مشاهدة تخص 25 شركة جزائرية خلال الفترة 2007-2019، بالاعتماد على الانحدار الخطي المتعدد.

حسب النتائج فإن نسبة الديون طويلة الأجل ونسبة الديون قصيرة الأجل لا تؤثر في إدارة الأرباح في الشركات الجزائرية. ويمكن تفسير ذلك بصعوبة تشتيت انتباه مستخدمي القوائم المالية من خلال إدارة الأرباح، بطريقة تغطي عن حقيقة الهيكل المالي للشركة، وغياب علاقة مباشرة بين الهيكل المالي والأرباح.

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أوضحت النتائج أيضا أن تكلفة التمويل تؤثر بشكل موجب في إدارة الأرباح، ويرجع ذلك لأهميتها كمعيار لاتخاذ القرارات المالية والاستثمارية، ووجود علاقة مباشرة بين تكلفة التمويل والأرباح. كلمات مفتاحية: إدارة الأرباح؛ ديون طويلة الأجل؛ ديون قصيرة الأجل؛ تكلفة التمويل؛ شركات جزائرية.

تصنيفات JEL: M40، M41

1. INTRODUCTION

Financial reporting is a mechanism for corporate governance (OECD, 2015, pp. 37-44), since the publication of financial information by the management for stakeholders allows it disclaiming its responsibility towards stakeholders and reduces the asymmetric information between them (Cui, Jo, & Na, 2018). With the information conveyed by the financial statements, financial accounting can be considered the main incentive for financial reporting. However, the previous studies suggested that financial statements are more and more likely to be managed for opportunistic purposes by managers through earnings management techniques (Stolowy & Breton, 2004) that know a widespread in the last two decades.

Earnings management can be affected by many factors, which determine its extent. Many studies indicated that earnings management level differs between companies depending on several factors. Based on Jensen & Meckling (1976), earnings management level can be affected by the company size (Political costs hypothesis), management incentives (Bonus plan hypothesis), and debt contracts (Debt covenant hypothesis). As companies need more and more liquidity to cover their working capital, they continue borrowing more and more money from banks. As a result, debt contracts are increasingly affecting the earnings management level.

Debt contracts are related to the financial policies of companies that determine their financial characteristics, which are often taken into consideration by the banks when lending the companies. Therefore, the present paper explores the effect of some financial characteristics on earnings management.

1.1. Research questions

We focused on three financial characteristics of Algerian companies that widely used to represent the financial policies of the companies, including long term debts, short term debts, and capital cost. Therefore, the following research questions guided this study:

- Are long term debts affect earnings management in Algerian companies?
- Are short term debts affect earnings management in Algerian companies?
- Is capital cost affects earnings management in Algerian companies?

1.2. Hypotheses

We tested the following null hypotheses at 5% level of significance:

- **Hypothesis 1:** Long term debts level affects positively the earnings management in Algerian companies.
- **Hypothesis 2:** Short term debts level affects positively the earnings management in Algerian companies.
- **Hypothesis 3:** Capital cost affects positively the earnings management in Algerian companies.

1.3. Purpose of the study

The purpose of the study is to measure earnings management in the Algerian companies and explore whether it is affected by the financial characteristics of the companies.

2. THEORETICAL BACKGROUND

In 1998, the Chairman of the SEC «Arthur Levitt» expressed increasing concern about the desire of the companies to meet investors' expectations in terms of earnings was resulting in erosion in the quality of financial reporting. He expressed concern that the motivation to achieve targets earnings estimates prompted many companies' managers to engage in earnings management (Carruth, 2002, p. 10).

Accounting literature defines earnings management as “distorting the application of generally accepted accounting principles.” Many in the financial community (including the SEC) assume that GAAP deters earnings management. However, earnings management results from the distortion of the application of GAAP less than from the application of inherently faulty GAAP (Rosenfeld, 2000).

In fact, earnings management is the use of accounting flexibility to influence the reported accounting earnings. According to Healy & Wahlen (1999), “earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers”.

Accounting literature distinguishes between two perspectives regarding the earnings management motivations:

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- **Opportunistic view:** under this view, managers seek to mislead users, or disclose information consistent with their expectations about performance and financial position of the company, in order to maximize their benefits.
- **Informational view:** under this view, managers seek to provide relevant information to reduce information asymmetry, and signal the financial market about the future of the company, and thus maximize its value.

Based on the "Positive Accounting Theory" of Watts & Zimmerman (1978) and the works about the "Value Relevance" of accounting information (Barth, Beaver, & Landsman, 2001), earnings management motivations can be classified into three groups:

- **Contractual motivations:** they stem from "Agency theory" and later from "Contracts theory", where contracts between the company and stakeholders depend on financial statements, so managers seek to provide accounting information consistent with contractual clauses, to increase their benefits, improve their reputation, or comply with debt covenants.
- **Financial market motivations:** they tend to affect stock prices, especially in the lead-up to IPOs and stock offerings. They interested also with the disclosure of earnings consistent with analysts' forecasts to prevent any significant volatility in stock prices in the short term.
- **Institutional motivations:** they arise as a result of the expected relationship between accounting information and governmental decisions, what lead managers manipulating earnings in order to reduce income tax payments, protect the company from any potential legislation (Antitrust, Environment, employee rights, etc.), and thus reducing political costs.

Concerning contractual motivations, debt covenants are much related to accounting information, as they often include a set of incentives or restrictive clauses, which are formulated based on accounting information, especially earnings. For that, managers tend to manipulate earnings to disclose accounting information consistent with those clauses, in order to achieve their benefits depending on the situation.

According to Mard (2005), pressures on managers can motivate earnings management. Moreover, the evolution of debts level is not only the focus of lenders but also the focus of all stakeholders, so to reassure all parties, managers of leveraged companies seek to improve its profitability, through earnings management. Therefore, many studies adopted the assumption that "leveraged companies tend to manage earnings towards the increasing". However, other studies adopted the inverse assumption that

“leverage limits accrual-based earnings management due to the scrutiny of auditors and regulators” (Vakilifard & Mortazavi, 2016).

3. LITERATURE REVIEW

Many studies have concerned by the relationship of earnings management with the corporate financing policy, especially leverage, but their results were mixed. Some studies indicated that no relationship has existed between leverage and earnings management (Zhang, Liu, & Xing, 2009; Tahir, Sabir, & Shah, 2011; Benkraiem, 2012; Uwuigbe, Uwuigbe, & Okorie, 2015). However, other studies indicated that leverage affects the earnings management, but they differ about the nature of this effect, whether is positive or negative (Beatty & Weber, 2003; Jelinek, 2007; Kontorizos, 2008; Wasimullah, Toor, & Abbas, 2010; Roodposhti & Chashmi, 2011; An, Li, & Yu, 2016).

Among the recent studies in this context, we found Zamri, Abdul Rahman, & Isa (2013), who examined the impact of leverage on real earnings management in Malaysian companies listed on the stock exchange. Based on 3745 observations during the period 2006-2011, the study found a negative relationship between leverage and real earnings management.

Obeidat (2016) interested in the relationship between the financial structure and earnings management in the companies listed on the Abu Dhabi Stock Exchange, using 29 companies during 2012-2015. According to the results, a positive and statistically significant effect of financial leverage on earnings management was existed. An, Li, & Yu (2016) examined also the relationship between earnings management and leverage, and whether this relationship was affected by the institutional environment. Using 25777 observations from 37 countries during 1989-2009, the results found a direct relationship between leverage and earnings management.

Gombola, Ho, & Huang (2016) tested the impact of leverage and liquidity on earnings management and capital management in American banks during the period 1999-2013. The results indicated a positive effect of leverage on earnings management and capital management, and a negative effect of liquidity on earnings management and capital management. Nikoomaram, Arabahmadi, & Arabahmadi (2016) interested in the relationship between earnings management and the capital structure. Through a sample of 119 companies listed on the Tehran Stock Exchange during the period 2000-2008, the study found a direct relationship between earnings management and debt.

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Other studies have concerned by the relationship between earnings management and the financing cost. Balvers (2009) examined the relationship between earnings management and capital cost. The study included 237 companies listed on the Amsterdam Stock Exchange during the period 2001-2007. The results did not found any effect of the capital cost (debt cost and equity cost) on earnings management.

Salteh, Valipour, & Zarenji (2012) investigated the relationship between earnings management and the weighted average cost of capital in Iranian companies. The study included 81 companies listed on the Tehran Stock Exchange during 2003-2009. The results indicated a negative relationship of discretionary accruals with WACC, while the relationship of nondiscretionary accruals with WACC was not statistically significant.

Mojtahedi (2013) analyzed the relationship of earnings management with the equity cost in the Malaysian companies. The study included 150 companies during the period 2000-2011 and found a weak negative relationship between earnings management and equity cost.

Patro & Kanagaraj (2016) examined whether earnings management affects the capital cost. The study included 14250 observations of Indian companies listed on the financial market during 2003-2013, and found an important effect of the discretionary accruals on the capital cost, while no effect of nondiscretionary accruals on the capital cost was recorded.

Mard (2004) focused on some factors affecting earnings management in French companies listed on the Paris Stock Exchange. These factors include financing policy, performance, and control. Through 294 companies during the period 1994-1998, the results showed that the financing policy is a determinant of the accounting policy, especially the debt and dividend, which are considered as incentives for earnings management.

Hong (2016) also found that the discretionary accruals before financing the operating working capital are more than before financing the investments, which means that companies that need short term financing are more tend to manage earnings comparing with the companies that need long term financing. Nagar & Sen (2016) demonstrated also that the company's financial position affects earnings management.

Starting from the previous studies, it appears that different results were reached in terms of the relationship between the financial characteristics of companies and earnings management. However, the results were generally indicated positive effects of leverage and financing cost on the earnings management. Even though this study does not differ

much from previous studies in terms of methodology, it is among the first in the Algerian environment, and it uses recent data.

4. RESEARCH DESIGN

4.1. Methodology

The study focused on the descriptive approach, where the financial statements of some Algerian companies were collected during the period 2007-2019, in order to obtain data related to the study variables. Then the statistical method was employed to process and analyze the collected Panel data through a multiple linear regression model.

4.2. Model specification

The model is a multiple linear regression that relates earnings management with companies' financial characteristics. The model is based on Balvers (2009), Uwuigbe, Uwuigbe, & Okorie (2015), and Obeidat (2016), who expressed earnings management as a linear function of financing policy (Leverage, Debt cost, Equity cost, Debt ratio... etc).

$$EM_{it} = \alpha_{it} + \beta_{it}LTD_{it} + \gamma_{it}STD_{it} + \delta_{it}WACC_{it} + \varepsilon_{it} \quad (1)$$

Where:

EM_{it} : is the earnings management level for the company i at the end of the period t .

LTD_{it} : is the long term debts for the company i at the end of the period t .

STD_{it} : is the short term debts for the company i at the end of the period t .

$WACC_{it}$: is the capital cost for the company i at the end of the period t .

$\alpha_{it}, \beta_{it}, \gamma_{it}, \delta_{it}$: are the regression coefficients of the model.

ε_{it} : is the error term, it represents the earnings management level that is not explained by the financial characteristics of the company.

4.3. Data collection

The data was collected from the financial statements of 25 Algerian companies during the period 2007-2019, where an unbalanced Panel data of 193 observations have been obtained, due to the difference between companies in terms of the years included in the study.

4.4. Independent variables measurement

The long term debts and the short term debts (LTD , STD) were directly measured depending on their amounts obtained from financial statements that weighted using the total assets, while the capital cost ($WACC$) was measured by the weighted average cost of capital.

4.5. Dependent variable measurement

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Earnings management (*EM*) was measured by the discretionary accruals, which have been estimated using Dechow, Sloan, & Sweeney's (1995) model shown in Equation (2).

$$TAC_{it}/A_{it-1} = \alpha_1(1/A_{it-1}) + \alpha_2[(\Delta REV_{it} - \Delta REC_{it})/A_{it-1}] + \alpha_3(PPE_{it}/A_{it-1}) + e_{it} \quad (2)$$

Where:

TAC_{it} : is the total accounting accruals. *A_{it-1}* : is the total assets

ΔREV_{it} : is the variation in sales. *ΔREC_{it}* : is the variation in customers.

PPE_{it} : is the property, plant and equipment.

α₁, α₂, α₃ : are the regression coefficients.

e_{it} : is the error term, which measures the discretionary accruals.

4.5.1. Calculating the total accruals: in the first step, we calculated the total accruals for each company in each year depending on Equation (3).

$$TAC_{it} = \Delta WCN_{it} + CP_{it} - DOT_{it} \quad (3)$$

Where:

ΔWCN_{it} : is the variation of working capital needs during the period.

CP_{it} : is the non-cash expenses of the period.

DOT_{it} : is the amortization and impairment expenses of the period.

4.5.2. Estimating the parameters of the model of Dechow et al. (1995):

in the second step, we estimated the parameters of the model of Dechow et al. (1995) that shown in Equation (2) using the data of all companies during the period of study (pooled regression).

4.5.3. Estimating the non-discretionary accounting accruals (*NDAC_{it}*):

in the third step, we estimated the non-discretionary accruals depending on Equation (4) and using the estimated parameters of the model of Dechow et al. (1995).

$$NDAC_{it}/A_{it-1} = \alpha_1(1/A_{it-1}) + \alpha_2[(\Delta REV_{it} - \Delta REC_{it})/A_{it-1}] + \alpha_3(PPE_{it}/A_{it-1}) \quad (4)$$

4.5.4. Calculating the discretionary accounting accruals (*DAC_{it}*): in the fourth step, we used Equation (5) to calculate the discretionary accruals.

$$DAC_{it}/A_{it-1} = TAC_{it}/A_{it-1} - NDAC_{it}/A_{it-1} \quad (5)$$

4.5.5. Earnings management index (*EM_{it}*): in the last step, we calculated earnings management as shown in Equation (6).

$$EM_{it} = |DAC_{it}|/A_{it} \quad (6)$$

5. RESULTS AND DISCUSSION

5.1. Descriptive statistic

Table 1 summarizes the descriptive statistics for 193 observations that concern 25 Algerian companies during the period 2007-2019. The table shows that the mean of earnings management reached 0.0759 with a standard deviation of 0.1341, which means that the discretionary accruals

represent 7.59% of the total assets of Algerian companies on average. This ratio does not differ much from the international average that closes to 6% (Agustia, Abdi, & Permatasari, 2020), while it is more dispersal.

Concerning the short term debts, the mean indicates that they represent 52.55% of the total debts on average. This means that there is a balance between short term debts and long term debts in the financial structures of Algerian companies on average. The capital cost of the Algerian companies reached 9.72% on average, and it was between 6.47% and 48.67% during the period of study, which indicates a high dispersion of the capital cost in the Algerian companies.

Table 1. Descriptive statistics for 193 firm-years observations (2007-2019).

	EM_{it}	LTD_BV_{it}	STD_D_{it}	$WACC_{it}$
Mean	0.0759	0.7622	0.5255	0.0972
Median	0.0397	0.4581	0.5126	0.0653
Max	1.4414	9.8119	1.0000	0.4867
Min	0.0015	-2.3292	0.0025	0.0647
Stand. Dev.	0.1341	1.1372	0.2608	0.1709
Observations	193	193	193	193

Source: Depending on SPSS V22.

5.2. Correlation

Table 2 summarizes the correlation between the variables of study. The table shows that the correlation relationships between the earnings management and the financial structure ratios do not have any statistical significance, as the significance level was more than 5%, both for the long term debts (22.50%) or the short term debts (10.30%). However, the correlation between the earnings management and the capital cost is statistically significant at 1% level of significance and reached 0.643.

The correlation relationships between the independent variables are statistically significant, but they are not strong, where the correlation relationship between long term debts and short term debts was negative and medium (-0.487). The correlation between long term debt and capital cost is also negative, but it is weak (-0.182). However, the correlation between long term debt and capital cost is positive and weak (0.193).

Table 2. Pearson's correlation coefficients between the variables.

Correlation Probability	EM_{it}	LTD_BV_{it}	STD_D_{it}	$WACC_{it}$
EM_{it}	1.000 -----	-0.088 0.225	0.118 0.103	0.643 0.000
LTD_BV_{it}		1.000 -----	-0.487 0.000	-0.182 0.011

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<i>STD_{it}</i>		1.000	0.193
		-----	0.007
<i>WACC_{it}</i>			1.000

Source: Depending on SPSS V22.

5.3. Model estimation

The model was estimated based on the three methods of panel data (Pooled Regression, Fixed Effects, and Random Effects) as shown in Table 3. The results indicate that the constant is statistically significant at 5% level of significance and it is positive in the three cases. Although the value of the constant was convergent for the three models, it was the lowest in the Pooled regression model and the highest in the Random Effects Model.

The regression coefficients of both the long term debts (*LTD_{it}*) and the short term debts (*STD_{it}*) are not statistically significant in the three cases. However, the regression coefficient of the capital cost (*WACC_{it}*) is positive and statistically significant at 1% level of significance in all cases, but its value from Fixed Effects Model is less than its value from Random Effects Model and Pooled Regression Model.

The table shows also that the model is statistically significant at 1% level of significance in all cases, but the F value is highest under the Pooled Regression Model and the lowest under the Fixed Effects Model. Concerning the determination coefficient, its value is important in all cases, as it reached 57.67% under the Fixed Effects Model and was the highest, and reached 51.37% under the Pooled Regression Model, and reached 46.88% under the Random Effects Model and was the lowest.

Table 3. Model's results using the different methods of panel data.

Independent variables		Dependent variable: <i>EM_{it+1}</i>		
		Estimation method		
		Pooled Regression Model	Fixed Effects Model	Random Effects Model
Constant	Coefficient	0.0461	0.0581	0.0560
	t-statistic	*(2.2664)	*(2.2449)	*(2.3905)
<i>STD_{it}</i>	Coefficient	0.0042	-0.0140	-0.0058
	t-statistic	(0.1412)	(-0.3599)	(-0.1787)
<i>LTD_{BV_{it}}</i>	Coefficient	0.0027	-0.0082	-0.0018
	t-statistic	(0.3962)	(-0.9662)	(-0.2496)
<i>WACC_{it}</i>	Coefficient	0.5869	0.5338	0.5814
	t-statistic	** (13.9095)	** (9.1517)	** (12.9780)
Adj. R ²		0.5137	0.5767	0.4688
F-statistic		** (51.7081)	** (10.3410)	** (43.3567)

Durbin-Watson	1.8033	2.3637	2.0378
S.E. of regression	0.0935	0.0872	0.0879
Sum squared residuals	1.6433	1.2479	1.4521
Log likelihood	186.0641	212.6224	-
Obs.	193	193	193

* Significant at 5% level

** Significant at 1% level

Source: Depending on SPSS V22.

5.4. Model selection

The results of the model estimation indicate a convergence between the three Panel data models, but the obtained results are not decisive, as they do not allow selecting the valid model for the hypotheses testing, this requires using appropriate statistical tests. Therefore we resorted to the Restricted F test and the LM Breusch-Pagan test. Both tests can be used to test the following hypothesis:

H₀: The Pooled Regression Model is most valid for model estimation.

H₁: The Fixed Effects Model and/or Random Effects Model are most valid for model selection.

The Restricted F test starts from calculating F' value using Equation (2) shown in Table 4 that summarizes the F-test results, indicating that the F' value is less than the F-critical value from F distribution at degrees of freedom (164 = 193 – 25 – 4) and (24 = 25 – 1). Consequently, the H₀ has been accepted, so the H₁ must be rejected, and thus The Pooled Regression Model is most valid for model estimation.

Table 4. Restricted F-test results.

N	NT	K	R ² _{FEM}	R ² _{PM}	F'	F-critical value
25	193	4	0.5767	0.5137	1.02	1.57

$$F' = \frac{(R^2_{FEM} - R^2_{PM}) / (N - 1)}{(1 - R^2_{FEM}) / (N \times T - N - K)} \quad (2)$$

Where: **F'** is the *F*-calculated value, **N** is the number of sections, **T** is the number of periods, **K** is the number of estimated parameters, **R²_{FEM}** is the determination coefficient from the Fixed Effects Model, **R²_{PM}** is the determination coefficient from the Pooled Regression Model.

Source: Depending on SPSS V22.

LM Breusch-Pagan test is based on the Lagrange multiplier, which provided the results summarized in Table 5. These results confirm the Restricted F-test, where LM Breusch-Pagan was not statistically significant, whether under section or time or under section and time. As a result, the H₀ has been accepted, so the model of study must be estimated using the Pooled Regression Model.

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Table 5. LM Breusch-Pagan test results.

		Section	Time	Time and Section
<i>LM Breusch-Pagan</i>	Statistic	3.6959	0.0139	3.7099
	Prob.	(0.0545)	(0.9060)	(0.0541)

Source: Depending on SPSS V22.

5.5. Hypotheses Testing

The regression coefficients of both long term debts and short term debts were not statistically significant, which indicates that no relationship exists between the earnings management and the financial structure ratios in the Algerian companies. Consequently, **Hypothesis 1** and **Hypothesis 2** must be rejected; so the long term debts and the short term debts do not affect earnings management in the Algerian companies. However, the regression coefficient of the capital cost is positive and statistically significant at 1% level, providing evidence that the capital cost affects positively the earnings management as it was supposed in **Hypothesis 3**.

5.6. Discussion

According to the model estimation, the Pooled regression model is valid and it is significant at 1% level, and its determination coefficient differs substantially from zero indicating that 51.37% of the changes in earnings management can be explained by the financial characteristics of companies. This confirms the works of Mard (2004, 2005), which found that the financing policy is a determinant of accounting policy, and the work of Nagar & Sen (2016), which indicated that the financial situation of the company affects the earnings management.

The results of this study confirm the studies that found that leverage does not affect the earnings management (Zhang, Liu, & Xing, 2009; Tahir, Sabir, & Shah, 2011; Benkraiem, 2012; Uwuigbe, Uwuigbe, & Okorie, 2015). However, they differ from many studies that found a positive effect of leverage on the earnings management (Beatty & Weber, 2003; Kontorizos, 2008; Roodposhti & Chashmi, 2011; An, Li, & Yu, 2016; Gombola, Ho, & Huang, 2016; Obeidat, 2016). They also differ from some

studies that found a negative effect of leverage on earnings management (Jelinek, 2007; Wasimullah, Toor, & Abbas, 2010; Zamri, Abdul Rahman, & Isa, 2013).

The results of this study are consistent with Patro & Kanagaraj (2016) that suggested a positive effect of the financing costs on earnings management. However, they differ from Salteh, Valipour, & Zarenji (2012) that found a negative relationship between discretionary accruals and the capital cost, and the Mojtahedi (2013) that found a weak relationship between the earnings management and the cost of equity, and Balvers (2009) that found that the capital cost does not affect the earnings management.

The absence of a significant relationship between the financial structure ratios and the earnings management can be attributed to the difficulty of distracting users from the financial structure by manipulating earnings, for example, lenders cannot ignore the increase of debts even if the earnings are increasing. On the other side, the capital cost is related to the long term, as it is a criterion for financing and investment decisions. So when the capital cost increased, managers tend to improve the performance and financial position of the company through earnings management.

6. CONCLUSION

Earnings management is generally used by managers to adapt the form and content of financial statements for opportunistic purposes, as it is difficult to discover them by auditors comparing with other techniques. Earnings management is determined by many factors, which have been referred to in the literature (Size, Sector, Performance, Financing policy...etc). Therefore, this study aims to examine the effect of some financial characteristics of Algerian companies on earnings management. The study focused on three financial characteristics, including long term debts, short term debts, and capital cost of 193 observations that concern 25 Algerian companies during the period 2007-2019.

According to the results, the financial structure ratios (long term debts and short term debts) do not affect the earnings management in the Algerian companies, as no statistically significant relationship has been recorded between the earnings management and the financial structure. This can be explained by the difficulty to attract users' attention through earnings management in a way to cover the fact of financial structure, and the absence of a direct relationship of the financial structure with earnings.

The results indicated that the capital cost affects positively and significantly the earnings management, due to the importance of capital cost

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as a criterion for financial and investment decisions, and the existence of a direct relationship between the capital cost and the earnings management in the income statement. This allows using earnings management to cover the reality of the capital cost.

There are some differences between the results of this study and the results of previous studies, which can be attributed primarily to the difference of the economic and institutional context, and the different accounting practices between countries, which play an important role in determining the level of accounting flexibility and the available earnings management techniques.

Despite the important results found and the explanations provided, the study is insufficient, as it is difficult to make a final judgment about the studied problem and to give conclusive interpretations. Consequently, future studies must analyze widely the financing policies of Algerian companies. The results require users to take into consideration the opportunistic accounting practices of managers when making decisions based on financial statements, especially when the capital cost increased. Auditors are invited also to focus more on examining the components of earnings in the periods that know a high level of capital cost.

7. Bibliography List

1. Agustia, D., Abdi, N., & Permatasari, M. (2020). Earnings management, business strategy, and bankruptcy risk: evidence from Indonesia. *Heliyon* , 6 (2), e03317.
2. An, Z., Li, D., & Yu, J. (2016). Earnings management, capital structure, and the role of institutional environments. *Journal of Banking & Finance* , 68, 131-152.
3. Balvers, S. (2009). *Earnings Management and the Cost of Capital*. Netherlands: Erasmus University.
4. Barth, M. E., Beaver, W. H., & Landsman, W. R. (2001). The relevance of the value relevance literature for financial accounting standard setting: another view. *Journal of Accounting and Economics* , 31 (1-3), 77-104.
5. Beatty, A., & Weber, J. (2003). The Effects of Debt Contracting on Voluntary Accounting Method Changes. *The Accounting Review* , 78 (1), 119-142.

6. Benkraiem, R. (2012). Board Independence, Corporate Governance and Earnings Management in France. In S. Boubaker, B. Nguyen, & D. Nguyen, *Corporate Governance*. Springer: Heidelberg.
7. Carruth, P. J. (2002). Earnings Management: The Role Of Accounting Professionals. *International Business & Economics Research Journal (IBER)* , 1 (3), 9-14.
8. Cui, J., Jo, H., & Na, H. (2018). Does Corporate Social Responsibility Affect Information Asymmetry? *Journal of Business Ethics* , 148, 549-572.
9. Dechow, P., Sloan, R., & Sweeney, A. (1995). Detecting earnings management. *The Accounting Review* , 70 (2), 193-225.
10. Gombola, M., Ho, A., & Huang, C. (2016). The effect of leverage and liquidity on earnings and capital management: Evidence from U.S. commercial banks. *International Review of Economics and Finance* , 43, 35-58.
11. Healy, P., & Wahlen, J. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons* , 13 (4), 365-383.
12. Hong, S. (2016). Earnings Management by Financing Purposes. *The Journal of Applied Business Research* , 32 (6), 1871-1879.
13. Jelinek, K. (2007). The effect of leverage increases on earnings management. *The Journal of Business and Economic Studies* , 13 (2), 24-46.
14. Jensen, M., & Meckling, W. (1976). Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* , 3 (4), 305-360.
15. Kontorizos, G. (2008). *Financial indications behind earnings management practices in Europe*, Master thesis. Netherland: ERASMUS University of Rotterdam.
16. Mard, Y. (2004). Gestion des résultats comptables : L'influence de la politique financière, de la performance et du contrôle. *25e congrès de l'AFC - Normes et Mondialisation*. Paris.
17. Mard, Y. (2005). Vers une information comptable plus transparente : l'apport des recherches portant sur la gestion des résultats comptables. *26e congrès de l'AFC Comptabilité et Connaissances*. Paris.
18. Mojtahedi, P. (2013). The relationship between Earning Management and Cost of Equity. *Technical Journal of Engineering and Applied Sciences* , 3 (4), 375-379.

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19. Nagar, N., & Sen, K. (2016). Earnings management in India: Managers' fixation on operating profits. *Journal of International Accounting, Auditing and Taxation* , 26, 1-12.
20. Nikoomaram, H., Arabahmadi, F., & Arabahmadi, A. (2016). The relationship between earning management and capital structure. *International Journal of Finance and Managerial Accounting* , 1 (1), 51-56.
21. Obeidat, M. (2016). Capital Structure Effect on the Practices of Earnings Management Phenomenon? The Evidence of Listed Firms in Abu Dhabi Securities Exchange. *Asian Journal of Finance & Accounting* , 8 (2), 171-193.
22. OECD. (2015). *G20/OECD Principles of Corporate Governance*. Paris: OECD Publishing.
23. Patro, A., & Kanagaraj, A. (2016). Is Earnings Management a Technique to Reduce Cost of Capital? Exploratory Study on Indian Companies. *Journal of Modern Accounting and Auditing* , 12 (5), 243-249.
24. Roodposhti, F., & Chashmi, S. (2011). The Impact of Corporate Governance Mechanisms on Earnings Management. *African Journal of Business Management* , 5 (1), 4143-4151.
25. Rosenfeld, P. (2000). *What drives earnings management?* Retrieved 2 25, 2020, from Journal of Accountancy: <https://www.journalofaccountancy.com/issues/2000/oct/whatdrivesearningsmanagement.html>
26. Rosenfeld, P. (2000). *What drives earnings management?* Retrieved 2 25, 2020, from Journal of Accountancy: <https://www.journalofaccountancy.com/issues/2000/oct/whatdrivesearningsmanagement.html>
27. Salteh, H., Valipour, H., & Zarenji, S. (2012). Investigating the Relationship between Earnings Management and Weighted Average Cost of Capital. *Business and Management Review* , 1 (12), 28-38.
28. Stolowy, H., & Breton, G. (2004). Accounts Manipulation: A Literature Review and Proposed Conceptual Framework. *Review of Accounting and Finance* , 3 (1), 5-92.
29. Tahir, S., Sabir, H., & Shah, S. (2011). Impact of Earnings Management on Capital Structure of Non- Financial Companies Listed On (KSE) Pakistan. *Global Business and Management Research* , 3 (1), 96-105.
30. Uwuigbe, U., Uwuigbe, O., & Okorie, B. (2015). Assessment of the Effects of Firms Characteristics on Earnings Management of Listed Firms in Nigeria. *Asian Economic and Financial Review* , 5 (2), 218-228.

31. Vakilifard, H., & Mortazavi, M. (2016). The Impact of Financial Leverage on Accrual-Based and Real Earnings Management. *International Journal of Academic Research in Accounting, Finance and Management Sc.* , 6 (2), 53-60.
32. Wasimullah, R., Toor, I., & Abbas, Z. (2010). Can High Leverage Control the Opportunistic Behavior of Managers: Case Analysis of Textile Sector of Pakistan. *International Research Journal of Finance and Economics* , 47, 137-144.
33. Watts, R., & Zimmerman, J. (1978). Towards a Positive Theory of the Determination of Accounting Standards. *The Accounting Review* , 53 (1), 131-156.
34. Zamri, N., Abdul Rahman, R., & Isa, N. (2013). The Impact of Leverage on Earnings Management. *Procedia Economics and Finance* , 7, 86-95.
35. Zhang, Z., Liu, X., & Xing, D. (2009). Corporate governance and earnings management: empirical evidence from chinese listed companies. *China Soft Science* , 45 (1), 122-133.