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The Impact of Creative Accounting Practices on Financial Performance in Industrial Companies listed on Amman Stock Exchange

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Abstract: The study sought to determine the effects of creative accounting practices on financial performance of industrial companies listed on the Amman Stock Exchange (ASE). In order to fulfill the study's goals, the primary data were collected from the financial statements of 42 industrial companies listed on ASE. Moreover, a multiple regression analysis was used to examine the study's hypotheses. The study's results revealed that creative accounting practices, which were income smoothing and earnings management, impacted financial performance that was measured by the return on assets and the return on equity. Therefore, the researchers recommend managers to pay attention to the levels of earnings management and income smoothing practices in evaluating the financial performance of industrial companies.

Keywords: Creative Accounting Practices, Financial Performance, Industrial Companies, Amman Stock Exchange, Jordan

1 Introduction

Accounting is a profession aimed at providing results of the business and financial situation of the company through the continuous recording and processing of its financial statements throughout the financial period, and then the issuance of accounting reports and statements should be exhibited in accordance with the standards and legislation that regulate the accounting operations, ensuring access to high-quality, accurate, transparent and impartial outputs [1].

Although accounting standards defined the use of accounting principles and methods of companies in the handling of financial statement items, as well as the continuous updating and development of these standards in a way that increases their efficiency, there is still flexibility in these standards in their handling of assets, revenues, liabilities and expenses [2]. This makes it possible for many departments to use this flexibility to show their company in an unrealistic situation, in order to demonstrate their own gains that could affect the decision-making related to the financial statements users and present the management of the corporation in an optimal way. These practices are called creative accounting practices [3].

Creative accounting has a range of practices, the most important of which are: Income Smoothing and earnings management, where these practices change the information in the financial statements, proportionate with the interests and desires of others at the expense of companies, thereby reducing the confidence of stakeholders and users of financial statements in the reliability and credibility of those statements [4].

Creative accounting practices in companies may lead to problems affecting their reputation, putting them in doubt and becoming unreliable to investors, thus influencing their decisions. This led researchers to examine the impact of creative accounting practices on financial performance in Jordanian companies, where the industrial sector is an important sector in the production process in Jordan through which goods are exported abroad and profitable investments are achieved to Jordanian economy and to stakeholders involved in industrial companies.

Financial performance represents the results of corporate business and is an important means of making many important decisions affecting companies and surrounding parties, also, financial performance is greatly influenced by the

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manipulation of financial statements through creative accounting practices [5,6,7,8,9]. The manipulation and misinformation of financial statements caused numerous large corporations to collapse, such as Enron and Worldcom, due to consequences of this manipulation which are the improper decisions concerning the company, as well as losing the confidence of investors and all those associated with the company and placing it in an unreliable position to become in a critical condition regarding its reputation in the market if exposed. Jordan has experienced poor economic conditions resulting from the Covid-19 pandemic, which affected various economic sectors, and the industrial sector was the most influenced sectors by this pandemic, especially in the light of the full quarantine, the closures that led to stop production for periods and restricted import and export operations [10,11,12,13], which negatively affected industrial companies and reduced the number of companies listed on the Amman Stock Exchange to 56 public shareholding company (Amman Stock Exchange), making the current situation a reason for industrial companies to manipulate financial statements in order to maintain the value and financial performance of their shares in the stock market to maintain their competitive position and continuity. Where creative accounting is one of the most important practices through which financial statements are manipulated and which have an apparent impact on the results of a company's business [14,15, 16,17].

This study's significance stems from the need to educate investors, owners, financial analysts, and other relevant parties about creative accounting practices, as well as their impact on financial performance of companies, when making economic decisions based on data that are free of error or bias, and in the importance of industrial sector in Jordanian economy. Because of its contribution to the development of Jordanian economy through manufacturing processes, increasing the volume of exports and reducing the volume of imports, as well as increasing gross domestic product of the country, the Jordanian industrial sector is now facing many pressures and challenges, particularly because of the existing crises, which make it important to examine the impact of creative accounting on the financial performance of these companies. Therefore, the study investigate the impact of creative accounting on financial performance of industrial companies.

2 Theoretical Framework and Hypotheses Building

2.1 Creative accounting

Creative accounting is a set of practices that make the image of financial statements data appear better and, thus,the image of the company as desired by management. Their aim is to obtain the required financial statements in the desired form, which are often developed in times of failure of the company in order to make their image better than it is [18]. Creative accounting is defined as unethical practices by the management of the company by exploiting flexibility and the ease of choosing accounting principles to achieve certain objectives, resulting in the production of unreliable financial information [19].

2.1.1 Earnings Management

It is expressed the manipulation by company's management of the financial performance results to obtain its purposes and mislead stakeholders. It is done by influencing a company's future performance that is negatively associated with either real earnings management or accrual management [20]. Earnings management is calculated by combining abnormal operating cash flows with abnormal production costs and abnormal operational expenses [21].

In this study, earnings management will be measured by using the modified Jones model [22], which is known as the optional accruals method that is calculated through the following proceedings:

The first proceeding: estimating overall accruals through the equation 1:

$$TACC_{i,t} = NI_{i,t} - OCF_{i,t} \tag{1}$$

Where: TACC: total accruals of the company, NI: net income of the company, OCF: operating cash flow of the company, t: (1,2,3, etc.) the time series measured by years, i: (1,2,3, etc.) companies related to this study.

The second proceeding: estimating the coefficients $\beta_1, \beta_2, \beta_3$ in the following regression model:

$$\frac{TACC_{i,t}}{A_{i,t-1}} = \alpha + \beta_1 \left(\frac{1}{A_{i,t-1}}\right) + \beta_2 \left(\frac{\nabla REV_{i,t} - \nabla REC_{i,t}}{A_{i,t-1}}\right) + \beta_3 \left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) + e_{i,t} \tag{2}$$

Where: TACC: total accruals of the company, A: total assets of the company, ∇REV: the change in the company's revenue, ∇REC: the change in accounts receivable of the company between the years t and t-1, PPE: the size of real

estate, equipment and the company's property, α: intercept value, $e_{i,t}$: the equation's random error, t: (1,2,3, etc.) the time series measured by years, $t-1$: the value in the previous year's t, i: (1,2,3, etc.) companies related to this study.
The third proceeding: estimating the non-optional accruals using the coefficients $\beta_1, \beta_2, \beta_3$ which were calculated through the equation 2 as follows:

$$NACC_{i,t} = \beta_1 \left(\frac{1}{A_{i,t-1}}\right) + \beta_2 \left(\nabla REV_{i,t} - \nabla REC_{i,t}\right) + \beta_3 \left(PPE_{i,t}\right) \tag{3}$$

Where: NACC= normal accruals of the company.
The fourth proceeding: calculating the optional accruals through the following equation:

$$ANACC_{i,t} = TACC_{i,t} - NACC_{i,t} \tag{4}$$

Where: ANACC: optional accruals of the company, TACC: non-optional accruals of the company, NACC: total accruals of the company, t: (1,2,3, etc.) the time series measured by years, i: (1,2,3, etc.) companies related to this study.
The fifth proceeding: the earnings management is evaluated through the absolute value of the quotient dividing optional accruals by total assets:

$$EarningsManagement = \left|\frac{ANACC_{i,t}}{A_{i,t-1}}\right| \tag{5}$$

2.1.2 Income Smoothing

It is defined as an excess or minus fluctuation of income within a period of time. It ensures that the company's management tries to reduce the abnormal difference of income, in line with generally accepted accounting principles (GAAP) [23]. Al-Shammari (2016) also defined it as a management behavior through which the company seeks to reduce fluctuations in its financial performance, particularly in terms of income matters [24]. This behavior is seen as an optional rather than a mandatory process by the management of the company to present a better picture of performance to the users of the financial statements data. Income smoothing could be measured based on the methodology of Francis et al. (2004) through the equation 6 as follow [25]:

$$Smooth_i = \frac{\sigma\left(\frac{NI_{i,t}}{BTA_{i,t}}\right)}{\sigma\left(\frac{CFO_{i,t}}{BTA_{i,t}}\right)} \tag{6}$$

Where: Smooth: company's income smoothing, σ: the standard deviation, NI: net profit for the year. BTA: total assets at the beginning of the year. CFO: net operating cash flow, t: (1,2,3, etc.) the time series measured by years, i: (1,2,3, etc.) companies related to this study.

2.2 Financial performance

Financial performance plays a significant role in organizations as a whole since it tries to assess the company's performance in several aspects that are beneficial to the recipients of the financial statements. Financial performance provides information that rationalizes financial decisions, and helps follow the company's business [26]. Financial performance is the degree to which a corporation is able to utilize its resources as effectively as possible in order to achieve the desired goals. It is also considered as a measure of change in the company's financial position [24,27]. In this study, financial performance could be measured through two indicators ROA and ROE.

Return on assets (ROA): it could be utilized to measure the net profit that the company obtains from the use of its assets. In other words, ROA at its highest level is an optimal indicator for evaluating the productivity of assets in profit generation. This, in turn, attracts investors to shareholding with the company [28]. ROA could be measured by dividing net profit after tax by total assets.
Return on equity (ROE): it is deemed as an indicator of a company's capability to produce profit through appropriate utilisation of the investors' capital [3]. ROE could be assessed by the ratio of the net profit after tax to total equity.

2.3 Creative accounting and financial performance

Al-Rawashdeh (2021) sought to determine the effects of creative accounting practices on reports and financial statements in the commercial banks listed on the Amman Stock Exchange (ASE) [29]. He found that the commercial banks listed on the ASE practice earnings management and creative accounting over the financial years covered by his study. Moreover, his results indicated that those banks were not aware of the effects of applying creative accounting and earnings management on financial reports which could be affected how trustworthy financial statements are. Emma and Obioma (2020) aimed to verify the influence of creative accounting practices on financial performance of financial institutions [30]. The study found that the structure and management of bank assets in Nigeria was weak, and that assets were not used effectively to enhance profitability. Identifying the effects of earnings management on the financial performance of companies listed on the ASE was the goal of [1]. The study discovered that earnings management had a statistically significant detrimental influence on the financial performance of those companies as evaluated by return on assets and economic value added. The research suggested educating the management of companies that use earnings management about the detrimental implications such practices may have on companies' overall performance. Similarly, Al-Takriti (2019) designed research to investigate how creative accounting impacted the financial performance of companies listed on the ASE [3]. His research provided a set of conclusions, the most significant was that the use of income smoothing in creative accounting practices had a negative result on the financial performance of companies listed on the ASE which was measured by return on equity and return on assets. The goal of [31] was to make clear how creative accounting affects financial statements. According to that study, creative accounting practices had a major influence on the preparation and presentation of financial statements, as well as showing information in the financial statements as preferred. Al-Natsheh and Al-Okdeh (2019) discussed the effect of creative accounting, i.e., earnings management and income smoothing, on earnings per share of companies in Jordan [32]. According to the study's results, the use of creative accounting had a statistical effect on earnings per share in industrial companies listed on the ASE. Based on the foregoing, the study hypotheses could be formulated as follow:

H1: Creative accounting practices have an impact on the financial performance of industrial companies listed on the ASE, which was evaluated by return on assets. This major hypothesis leads to the following two minor hypotheses:

- *H1a: Income smoothing has an impact on the financial performance of industrial companies listed on the ASE, which was evaluated by return on assets.*
- *H1b: Earnings management has an impact on the financial performance of industrial companies listed on the ASE, which was evaluated by return on assets.*

H2: Creative accounting practices have an impact on the financial performance of industrial companies listed on the ASE, which was evaluated by return on equity. This major hypothesis leads to the following two minor hypotheses:

- *H2a: Income smoothing has an impact on the financial performance of industrial companies listed on the ASE, which was evaluated by return on equity.*
- *H2.2: Earnings management has an impact on the financial performance of industrial companies listed on the ASE, which was evaluated by return on equity.*

3 Study Methodology

The current study relied on the analytical descriptive approach by analyzing the content of the financial statements mainly. In research like this one, the analytical descriptive methodology is most frequently applied. In order to gather information on creative accounting practices and show how they affect financial performance between 2010 and 2020, the study examined the actual financial information published in the financial statements and annual reports of the industrial public shareholding companies that represented the sample of this study.

The population of the current study includes all public shareholding industrial companies listed on the ASE. This was found to be as many as 56 at the end of 2020, issued at the (Amman Stock Exchange). A determined sample of the study community was relied upon by selecting companies provided that the company's stock trading during the study period was within the regular market, that all the data necessary to calculate earnings management and income smoothing during the study period were available, and that there was no merger of the company with other companies. Accordingly, the sample represented 42 industrial companies listed on the ASE from the study population.

4 Study Results

The current section discusses the descriptive analysis of the study variables, testing the validation of the data for the suggested study model, and examining the study hypotheses. Moreover, it demonstrates the results of the tests that were fulfilled in the current study through statistical analysis techniques.

4.1 Descriptive statistics

The following descriptive statistical tests were conducted after the data of the study variables were obtained from the financial statements of the sample companies:

Table 1: Results of descriptive statistics for creative accounting variables

Income Smoothing				Earnings Management			
Std. Div	Mean	Max	Min	Std. Div	Mean	Max	Min
11.48	2.82	137.27	0.00	0.07	0.08	0.33	0.00
The general average the income smoothing level for the industrial sector during the years of study: 3.71377				The general average of the optional accruals for the industrial sector during the years of study: 0.06781			
Total companies that practice income smoothing: 13 companies				Total companies that practice earnings management: 25 companies			
Total companies that don't practice income smoothing: 29 companies				Total companies that don't practice earnings management: 17 companies			

Table 1 reports the descriptive statistics of the independent variables, i.e., earnings management, measured through optional accruals and income smoothing. This table demonstrates the lowest level of earnings management based on the value of optional accruals is 0.00. However, the highest level of earnings management given by the value of optional accruals was 0.33. It is also observed that the average of optional accruals for the sample study was 0.08.

Additionally, the optional accruals mean for all sample companies across all years 0.0678 revealed that 25 companies have optional accruals that are higher than the optional accruals mean for all companies 0.06781. On the other hand, there were 17 companies whose optional accruals did not surpass the optional accruals mean, which means that the largest percentage of companies this year practiced earnings management. To put it another way, this indicates that 59.5% of the research sample companies have used earnings management over the years, whereas 40% have not.

With regard to the income smoothing variable, Table 1 lists the lowest income smoothing reached 0.00. Nonetheless, the maximum income smoothing was 137.27. Further, which is worth mentioning that the sample companies' income smoothing had a mean of 2.82. By comparing the income smoothing for each company of the study sample with the previous mean, It is evident that during the study period, 13 companies used the income smoothing belonging to creative accounting. Whereas 29 companies did not use income smoothing. This indicates that 31% of the study sample companies engaged in income smoothing throughout the study period, while 69% did not.

It was discovered that the practice of earnings management is more frequently used than income smoothing in industrial public shareholding companies according to the results of the descriptive analysis of creative accounting practices.

Table 2: Results of descriptive statistics for the dependent and control variables

Variable	Min	Max	Mean	Std. Div
ROA	-36.03	18.66	0.39	8.77
ROE	-96.04	123.11	0.07	18.73
Company Size	320140	1223269000	69902493	196263793
Company Age	3	67	29.21	14.74

The results of descriptive statistical analyses of the study's dependent and control variables are shown in Table 2. It is highlighted that the mean of return on assets was 0.39, demonstrating that the study sample generates profit from return on its assets. The difference between the lowest return on assets -36.03 and the highest return on assets 18.66 was -17.37. This result indicates that there is dispersion in the sample study data related to return on assets which are expressed by a standard deviation of 8.77. Return on equity, its mean was 0.07, is referred that these companies are generating good profits for their owners.

Regarding the size of the companies, it should be mentioned that the research sample companies' average asset size was 69902493 JD. The sample companies' assets ranged in size from 320140 to 1223269000. These variations in the sample companies' assets support the standard deviation of 196263793. In terms of the companies' age, it ranged between 3 to 67 years, with a mean age of 29.21, i.e., approximately 29 years, with a standard deviation of 14.74.

The relevant information was gathered on the study's variable associated with audit office size from the financial statements of the companies. This variable was dummy, where the audit firms connected to an international company were assigned the value 1 and 0 otherwise. The descriptive analysis's findings were listed in Table 3.

Table 3: Descriptive statistics of the audit office size variable

Big 4 or Not	Frequency	Percentage
Audited annual reports by regular audit firms	290	62.9%
Audited annual reports by Big 4 companies	172	37.1%

Table 3 demonstrates the descriptive analysis results of the control variable represented by the audit office size. It was discovered that 290 annual reports, or 62.9% of the study sample's annual reports, were audited by companies unrelated to international ones. Otherwise, just 172 annual reports or a small portion representing 37.1% of annual reports were audited by international audit companies affiliated with Big4 corporations, such as Deloitte and Ernst and Young Jordan.

4.2 Data suitability test

One of the crucial procedures to take into account in the prior statistical analysis tests on data is to make sure that the study's data do not contain extreme values that might skew the findings or obtain spurious values, compromising the accuracy of the results acquired. Therefore, some authors mentioned that it is essential to remove these extreme values by 5% of the maximum and minimum bounds of the study's variables to accomplish homogeneity and moderation of the data used in the statistical analysis [33,34]. Hence, using the explore test, extreme values for this study were eliminated. Initially, the multiple regression assumptions were tested. According to [35], a set of statistical examinations including the normality, the autocorrelation, and the linear interference tests were conducted for the study models to estimate the validity and suitability of the data for statistical analysis [36,37].

4.3 Normality

The normality of the data was verified to obtain accurate results for examining the effect of creative accounting practices on the financial performance using the Kolmogorov-Smirnov test because the study observations were higher than 30 [38, 39,40,41,42]. The results of the Kolmogorov-Smirnov test are listed in Table 4.

Table 4: Kolmogorov-Smirnov test for normality

Variables	Value	Sig.
Earnings management	0.116	0.063
Income smoothing	0.404	0.077
ROA	0.108	0.083
ROE	0.147	0.051
Company size	0.075	0.060
Company age	0.100	0.094
BIG4	0.412	0.078

The data demonstrated in Table 4 clarify that the study's variables follow the normal distribution, According to Alolayyan et al. (2022), the results of a probability value exceeding 0.05 indicates that data follows the normal distribution [43,44,45]. Therefore, this result enables researchers to perform analysis tests and rely on parametric tests to measure the study's hypotheses.

4.4 Autocorrelation and linear interference test

By performing the linear interference test based on the variance inflation factor (VIF) and the tolerance factor, along with the autocorrelation test based on the Durbin-Watson test, it was confirmed that there is no autocorrelation problem or linear interference in the study data.

Table 5: Linear interference and autocorrelation tests

Variables	VIF	Tolerance
Earnings management	1.085	0.921
Income smoothing	1.006	0.994
Company size	1.120	0.893
Company age	1.011	0.989
BIG4	1.033	0.968
Durbin-Watson= 1.946		

The results presented in Table 5 illustrate that the linear interference problem between study variables did not exist, as the value of VIF for study variables was lower than the upper bound of 10 [46]. Likewise, the Tolerance value for study variables exceeded the lower threshold of 10% [47]. These results confirmed that there is no linear interference problem that negatively affects the validity of the study results. In terms of the Durbin-Watson test, its value was 1.946. based on [48], the result of this test which ranged between 1.5 and 2.5 is evidence that there is no autocorrelation in the study model.

4.5 Study hypotheses test

The first main hypothesis (H1) indicated that the creative accounting practices have an impact on the financial performance, which was evaluated by return on assets.

Table 6: Results of the first hypothesis test

Variables	Coefficient (β)	Sig.	t-Statistic
Constant		0.000	-5.058
Earnings management	-0.187	0.000	-4.659
Income smoothing	-0.367	0.000	-8.791
Company size	0.246	0.000	5.799
Company age	0.118	0.004	2.928
BIG4	-0.116	0.004	-2.856
R^2	$Adjusted - R^2$	F	$F(Sig.)$
0.311	0.303	38.696	0.000

Table 6 displays the findings of the first model test using the multiple regression analysis of the independent variables represented by the combined creative accounting practices, i.e., earnings management and income smoothing, and their effect on the dependent variable, i.e., financial performance measured by return on assets, in the presence of control variables, i.e., size and age of the company and audit office size. The result of this hypothesis indicated that the F value was 38.696 was significant at a 0.05 level. in the other words, the proposed model was appropriate, and the study's hypothesis was supported. The adjusted R2 coefficient was 0.303, which indicates that about 30% of changes in financial performance could be explained by the change in creative accounting practices in the presence of control variables. The results of the multiple regression test were relied upon to determine the impact of each creative accounting practice on financial performance measured by return on assets.

The first minor hypothesis (H1a), emerging from the first major hypothesis, argued that income smoothing has an impact on the financial performance, which was evaluated by return on assets. This hypothesis was supported based on its significant level which was less than 0.05. Moreover, the statistical results showed that the effect coefficient was -0.187, thus, the relationship between income smoothing and return on assets was inverse. Therefore, the decrease of one unit in income smoothing causes an increase of 0.187 units in return on assets. Similarly, the second minor hypothesis (H1b) indicated that earnings management has an impact on the financial performance, which was evaluated by return on assets, was supported by the dependence on the significant level which was less than 0.05. The effect coefficient for this hypothesis was -0.367, therefore, the relationship between earnings management and return on assets was inverse. Hence, the decrease of one unit in earnings management causes an increase of 0.367 units in return on assets.

The second main hypothesis (H2) indicated that the creative accounting practices have an impact on the financial performance, which was evaluated by return on equity.

Table 7: Results of the second hypothesis test

Variables	Coefficient (β)	Sig.	t-Statistic
Constant		0.002	-3.165
Earnings management	0.203	0.000	4.456
Income smoothing	-0.189	0.000	-4.012
Company size	0.161	0.001	3.349
Company age	0.076	0.098	1.657
BIG4	-0.061	0.187	-1.322
R^2	$Adjusted - R^2$	F	$F(Sig.)$
0.127	0.117	12.330	0.000

Table 7 reports the findings of the second model test using the multiple regression analysis of the independent variables represented by the combined creative accounting practices, i.e., earnings management and income smoothing, and their effect on the dependent variable, i.e., financial performance measured by return on equity, in the presence of control variables, i.e., size and age of the company and audit office size. The result of this hypothesis indicated that the F value was 12.330 was significant at a 0.05 level. in the other words, the proposed model was appropriate, and the second major hypothesis was supported. The adjusted R2 coefficient was 0.117, which indicates that about 12% of changes in financial performance could be explained by the change in creative accounting practices in the presence of control variables. The results of the multiple regression test were relied upon to determine the impact of each creative accounting practice on financial performance measured by return on equity.

The first minor hypothesis (H2a), emerging from the second major hypothesis, argued that income smoothing has an impact on the financial performance, which was evaluated by return on equity. This hypothesis was supported based on its significant level which was less than 0.05. Moreover, the statistical results showed that the effect coefficient was 0.203, thus, the relationship between income smoothing and return on equity was positive. Therefore, the increase of one unit in income smoothing causes an increase of 0.203 units in return on equity. Contrary, the second minor hypothesis (H2b) indicated that earnings management has an impact on the financial performance, which was evaluated by return on equity, was supported by the dependence on the significant level which was less than 0.05. The effect coefficient for this hypothesis was -0.189, therefore, the relationship between earnings management and return on equity was inverse. Hence, the decrease of one unit in earnings management causes an increase of 0.189 units in return on equity.

5 Discussion

According to the statistical results, creative accounting practices had an influence on the financial performance which is assessed by return on assets. This result is similar to the findings of [1,3,30]. Therefore, the proposed first model of creative accounting practices was able to predict the return on assets. Likewise, the study found that creative accounting practices had an influence on financial performance which is assessed by return on equity. This result corresponds with the findings of [3,30]. Hence, the study model on the ability of creative accounting practices could predict the return on equity of these companies could be accepted.

The study found that income smoothing impacted financial performance measured by the return on assets of. The result indicated that the investment decisions are related to returns on their invested assets. Some companies might use income smoothing to convince different stakeholders that the company operates successfully with almost stable growth rates in order to reduce the investment risks in the company from the investors' perspective. It is also showed that 31% of companies practice income smoothing according to the methodology used in the study of [25], to impact the overall net profit by increasing or decreasing depending on the purpose and desire of management, reflecting on the financial performance, particularly the ratio of return on assets, which explains the impact of the practice of income smoothing on return on assets. This result is similar to the findings of [1,3,30].

The study found that income smoothing had an impact on financial performance measured by the return on equity. This finding is due to what is customary in the financial markets, where there are many investors whose investment decisions are associated with returns on their equity. Therefore, some companies might use income smoothing to convince different stakeholders that the company operates successfully with almost stable growth rates. Thus, to reduce the investment risks in the company from the investors' perspective and explain the impact of the practice of income smoothing on return on equity. This result is in harmony with [3,24,30].

Furthermore, it indicated that earnings management practice affected financial performance measured by return on equity. Accordingly, return on equity considers one of the critical financial ratios that are awarded by investors and stakeholders through making their financial and investment decisions. Also, the decrease in the mean of the return on

equity of the study sample which reached 0.07, is an incentive for the management of these companies to use creative accounting practices through earnings management, along with the increase of optional accruals in order to increase these ratios and profits to maintain and attract more investors. This result is analogous to [30].

6 Recommendations

Based on the study findings, it could be recommended for managers to pay attention to the earnings management and income smoothing practicing levels of evaluating the financial performance, and to exclude practices that do not add value to the company because of their negative impact on the financial performance of these companies. The administrations of companies could use these measurement models to measure the level of creative accounting practice and recommend the external auditors show the percentage of earnings management measurement in financial reports as it has a significant impact on earnings per share. Moreover, there must be strictness in the application of penalties to anyone who plays a role in practicing creative accounting, which are earnings management and income smoothing, to manipulate profits and mislead financial statements, as this has a negative impact on decisions taken by many parties that rely on the financial statements' outputs. In addition to activating and giving a greater role to internal control through the internal audit departments of public shareholding industrial companies in order to detect cases of manipulation by corporate administrations and to focus on where management exploits it to manipulate.

Conflicts of Interest Statement

The authors certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

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