




# The Impact of CEO Narcissism, Firm Performance, and Company Growth on Tax Avoidance: Emphasizing the Role of Earnings Management in Listed Companies on The Stock Exchanges of Iraq and Oman




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**Abstract:** This study examines the impact of CEO narcissism, firm performance, and company growth on tax avoidance in listed companies on the stock exchanges of Iraq and Oman from 2015 to 2022, with a focus on the role of earnings management. Using a sample of listed firms from both countries, we analyze the relationships between CEO narcissism, firm performance metrics, company growth indicators, earnings management practices, and tax avoidance strategies. Our findings indicate that CEO narcissism has a significant positive effect on tax avoidance in both Iraq and Oman. Additionally, firm performance is positively associated with tax avoidance in both countries. Furthermore, earnings management strengthens the relationship between CEO narcissism and tax avoidance in Iraq. However, earnings management does not moderate the relationship between firm performance and tax avoidance in either country. These results contribute to the understanding of corporate tax behaviors and highlight the importance of considering CEO characteristics and earnings management practices in tax planning strategies. The findings have implications for corporate governance, regulatory oversight, and future research in the field of tax avoidance and earnings management.

**Keywords:** Narcissism, Tax avoidance, Profit management, Stock Exchange.

## 1. Introduction

Tax avoidance is traditionally perceived as a value-maximizing activity that transfers wealth from the government to company shareholders within the framework of theory. Recent research argues that tax avoidance activities can enable opportunistic behavior by management [1, 2]. Tax avoidance involves utilizing legal loopholes in tax laws to reduce taxes, which can be achieved through income shifting to low-tax jurisdictions or transfer pricing. According to the definitions provided in this context, tax avoidance represents a continuous and sustainable strategic financial planning strategy encompassing entirely legal activities. It involves directing corporate resources towards tax-

exempt activities such as investing in tax-exempt securities, timing transactions and events within a specific timeframe to take advantage of tax benefits, and employing accounting methods that create more tax savings [3].

Financial performance improves with two main approaches: sales growth, which results in value creation for customers, and enhanced financial productivity or profitability [4]. In other words, financial objectives include increasing sales and profitability, succinctly summarized as profitable growth. Sales growth reflects long-term financial goals, while productivity enhancement reflects its short-term aspect. Balancing these two long-term shareholder values results from this. In practice, growth-oriented strategy is the primary focus of any successful company, proving their leading growth rates [5]. Research in this area has shown that investors value an unexpected increase in sales much more than an unexpected decrease in costs; therefore, interpreting unexpected profits necessitates breaking them down into revenue and cost components. This finding holds stronger for growth companies than value companies.

On the one hand, profitability and revenue generation are primary objectives of any productive and economic activity. If there is no benefit, there is no reason to engage in that activity. Economic and productive activities are conducted to satisfy human wants and needs, and resources such as time, costs, labor, etc., are allocated to this end. If the revenue from economic activity covers its costs, meaning it does not exceed the expenses, it indicates that there is no profit, and the execution of that production and economic activity is futile. The higher the profitability, the more rational and feasible it becomes to continue the activity. In fact, profitability refers to a company's ability to generate income exceeding its expenses [6].

On the other hand, CEO narcissism (overconfidence or excessive trust in management) is one of the most important personality traits of managers that influences risk-taking behavior [7]. Chen et al. (2021) argue that CEO narcissism, overconfidence in management, or narcissism is one of the most important concepts in behavioral finance and the most significant findings in psychology in the field of judgment and decision-making [8]. Researchers have found that individuals have a high level of confidence in their abilities and knowledge, although they do not express this inner feeling and may not even be aware of it [9]. In summary, such individuals believe they are smarter than they actually are and are convinced they have better information. In a study by Bazrafshan et al. (2019), it was found that many companies engage in earnings management for the purpose of tax avoidance. According to agency theory, company managers have the ability to manipulate and manipulate information [10].

CEO narcissism may implement aggressive tax policies to achieve personal ambitions such as earning higher profits through tax avoidance, self-admiration, or higher CEO compensation [11-13]. In this regard, Richardson (2006) demonstrated that overconfident CEOs have a greater need for more cash flows to meet their investment and innovation needs. However, during times of uncertainty and considering social and equality issues, aggressive tax policies can be negatively interpreted by some stakeholders who perceive them as policies that reduce social trust (stakeholders). Therefore, there are two general perspectives on corporate tax avoidance: on one hand, this strategy increases company cash flows and shareholder wealth, and on the other hand, it represents social irresponsibility by depriving the community of tax revenue [11].

Profitability of a company indicates its ability to generate profits for a specific period at a certain level of sales, assets, and capital. One of the indicators of asset return's profitability is the black return [14]. Minh Ha et al. (2021) state that companies with high levels of profitability have the opportunity to reduce tax levels through tax avoidance. When it comes to profitability, Rezki et al. (2020) have stated that profitability is also a driving force for companies to avoid taxes [15]. Companies with high profitability levels are significantly striving to have plans to reduce their tax liabilities, where the company feels that the amount it has to pay for its tax expense is very high

[16], which is also affirmed by Gonasi that companies with high profit rates seek to avoid taxes. Profitability is the result of the smart decisions made by management. Malik and Munir (2024), Khuong et al. (2020), and Alsmady (2023) have empirically proven that asset returns have a positive impact on tax avoidance [2, 17, 18].

Tax avoidance behavior serves as a motivation for earnings management [11, 19]. Studies on earnings management have shown that tools such as changes in accounting policies, earnings smoothing (a type of earnings management), income maximization, and income smoothing are the primary instruments managers use in earnings management [20]. However, the earnings management literature suggests that companies, in their effort to manage earnings, structure accounting policies to create differences in taxable income and accounting income [21]. These empirical studies have shown that managers manage earnings in a way to report less income for lower tax payments (Afrizal et al., 2020). These tax avoidance mechanisms result in revenue loss, preventing the government from fulfilling its social and economic responsibilities [22]. According to Hong et al. (2022), tax avoidance mechanisms provide an opportunity space for opportunistic managers to pursue self-serving goals and manage profits in a way that benefits managers rather than shareholders' interests [23]. Therefore, managers who manage earnings are likely to secure themselves more with increased tax avoidance, as avoiding taxes protects them against shareholder scrutiny. Again, minimizing tax payments leaves a surplus of cash flow after taxes that can be distributed as extra dividends or invested in profitable projects.

The impact of earnings management moderation on the relationship between CEO entrenchment, company profitability, company growth, and tax avoidance has been researched for the first time in Iraq and Oman. Therefore, the main research questions are posed as follows:

Does earnings management moderation moderate the relationship between CEO characteristics, company characteristics, and tax avoidance?

## 2. Methodology

The population of this research consists of companies listed on the stock exchanges of Iraq and Oman during the years 2015 to 2022. The sampling method employed in this study is purposive sampling, wherein selected companies are chosen from a set of listed companies on the stock exchanges of Iraq and Oman, based on the constraints outlined in Table 1.

**Table 1.** The number of companies

Companies Listed on the Iraqi Stock Exchange	Number of Companies
Total number of companies	130
Insurance and Banks	(40)
financial institutions	(31)
Non-disclosure of information	(26)
Total sample	33
Companies Listed on the Oman Stock Exchange	
Total number of companies	55
Insurance and Banks	(5)
financial institutions	(2)
Non-disclosure of information	(17)
Total sample	31

The fundamental information and primary data required for hypothesis testing are obtained from the database of the Iraqi and Oman Stock Exchange. The data analysis method employed is cross-sectional and longitudinal

(such as panel data). Multivariate linear regression is utilized to assess the hypotheses, while descriptive and inferential statistical techniques are applied to analyze the collected data. To describe the data, the frequency distribution table is utilized. For inferential analysis, the F-Limer test, Hussmann test, normality test, and multiple linear regression tests are conducted to evaluate the research hypotheses

### 2.1. Research Model

Equation (1) was used to test Hypothesis 1 and 2, and Equation (2) tested Hypotheses 3 and Model 1.

$$1) ETR_{it} = B_0 + B_1 CEONarcissism_{i,t} + B_2 ROA_{i,t} + B_3 Growth_{i,t} + B_4 LEV_{i,t} + B_5 R\&D_{i,t} + B_6 Owncon_{i,t} + B_7 Bsize_{i,t} + B_8 Duality_{i,t} + B_9 Fsize_{i,t} + B_{10} CEOage_{i,t} + B_{11} Gender_{i,t} + B_{12} Tenure_{i,t} + B_{13} Ability_{i,t} + B_{14} Overconfidence_{i,t} + \Sigma industry_i + \Sigma Kyeart + \varepsilon$$

$$2) ETR_{it} = B_0 + B_1 CEONarcissism_{i,t} + B_2 EM_{i,t} + B_3 CEONarcissism_{i,t} EM_{i,t} + B_6 LEV_{i,t} + B_7 R\&D_{i,t} + B_8 Owncon_{i,t} + B_9 Bsize_{i,t} + B_{10} Duality_{i,t} + B_{11} Fsize_{i,t} + B_{12} CEOage_{i,t} + B_{13} Gender_{i,t} + B_{14} Tenure_{i,t} + B_{15} Ability_{i,t} + B_{16} Overconfidence_{i,t} + \Sigma industry_i + \Sigma yeart + \varepsilon$$

$$3) ETR_{it} = B_0 + B_1 ROA_{i,t} + B_2 EM_{i,t} + B_3 ROA_{i,t} * EM_{i,t} + B_6 LEV_{i,t} + B_7 R\&D_{i,t} + B_8 Owncon_{i,t} + B_9 Bsize_{i,t} + B_{10} Duality_{i,t} + B_{11} Fsize_{i,t} + B_{12} CEOage_{i,t} + B_{13} Gender_{i,t} + B_{14} Tenure_{i,t} + B_{15} Ability_{i,t} + B_{16} Overconfidence_{i,t} + \Sigma industry_i + \Sigma Kyeart + \varepsilon$$

#### The Dependent Variable

**ETR<sub>i,t</sub>**: method of measuring tax avoidance is the effective tax rate (ETR), which is calculated as follows:

$$ETR = \frac{TAXEXP}{EBT} \text{ Where:}$$

- *TAXEXP* represents the tax expense.
- *EBT* represents earnings before taxes.

With this method, the effective tax rate is expressed as a percentage of the tax expense to earnings before taxes.

#### Independent Variable

**CEO Narcissism<sub>i,t</sub>**: CEO Narcissism, refers to the size of managers' signatures. The size of signatures was extracted from the first page of financial statements where board members confirm the financial statements with their signatures. A rectangle was drawn around each signature to identify the endpoints of the signature on each side (Hamel et al., 2017). Then, using Imaje J software, the area of the signature was measured and entered into Excel. The areas were categorized into three groups: small (first quartile), medium (second and third quartiles), and large (fourth quartile). For small signature size, code 1 was assigned, for medium signature size, code 2, and for large signature size, code 3. For each fiscal year, the number of signatory members in each quartile was multiplied by the corresponding code, and then these numbers were summed up. Thus, for each fiscal year, the score related to the signatures of board members was calculated and divided by the number of signatory members in that year, and the resulting number was considered as the size of the board of directors'.

**Return on Assets (ROA)**: is equal to the ratio of pre-interest and pre-tax income to the total assets of the company.

#### Modifier Variables

**Earnings management**  $i,t$ : earnings quality tested and checked by various criteria and if only one criterion or a limited set of criteria is used in its evaluation, the result of the tests may be incorrect and not reliable. Therefore, in this research, accrual items quality criterion is used.

$$4) TACC_{i,t} = \alpha + \beta_1 \frac{1}{TA_{i,t-1}} + \beta_2 \frac{CFO_{i,t-1}}{TA_{i,t-1}} + \beta_3 \frac{CFO_{i,t}}{TA_{i,t-1}} + \beta_4 \frac{CFO_{i,t+1}}{TA_{i,t-1}} + \beta_5 \frac{\Delta Sales_{i,t}}{TA_{i,t-1}} + \beta_6 \frac{PPE_{i,t}}{TA_{i,t-1}} + \varepsilon_i$$

$TACC_{i,t}$ : total accruals of company i in year t

$TA_{i,t-1}$ : total assets of company i in year t-1

$CFO_{i,t}$ : operating cash flow of company i in years t-1, t and t+1

$PPE_{i,t}$ : fixed assets of company i in year t

$\Delta Sales_{i,t}$ : sales changes of company i in year t

From this model, The lower the model error, the lower the Earnings management.

### Control Variables

**Sales Growth**: Growth in company sales compared to the previous period

**LEV (Financial Leverage)**: Equal to the ratio of total debt to total assets of the company.

**R&D Expenses (R&D)**: Research and development expenses divided by total assets of the company.

**Institutional Ownership (Owncon)**: According to Kallatzis, Palikaras, and Mosholin (2010), institutional ownership is defined as the percentage of shares held by government and public entities out of the total capital stock.

**Board Size (Bsize)**: Logarithm of the number of board members

**CEO Duality (Duality)**: A dummy variable that equals 1 if the CEO is also the chairman of the board, and 0 otherwise.

**SIZE (Fsize)**: Company size, calculated as the natural logarithm of total assets.

**CEO Age (CEOage)**: Natural logarithm of the CEO's age

**Tenure $_{i,t}$** : The number of years the CEO has been in office.

**CEO ability** : CEO ability as defined by Demerjian et al. (2012), is used as a measure of managerial ability. It is assessed through a coverage analysis with the following model:

$$\text{Firm efficiency} = \beta_0 + \beta_1 \text{size} + \beta_2 \text{MS} + \beta_3 \text{OCFI} + \beta_4 \text{FCI} + \beta_5 \text{age} + e$$

- size: Represents the size of the company, calculated as the natural logarithm of the total assets.
- MS: Indicates the ratio of the company's sales to the total industry sales.
- OCFI: Refers to the operational cash flow of the company.
- Age: Represents the duration the company has been listed on the stock exchange.
- FCI: Represents having foreign branches and engaging in export or import activities. It takes the value of 1 if the company engages in such activities, otherwise, it is 0.

The result obtained from this model ranges between 0 and 1, where a higher value indicates greater efficiency. Since firm efficiency may differ from managerial efficiency, the model is executed to assess the managerial ability, and the error obtained indicates the managerial ability.

**Management Overconfidence:** In this study, the efficiency of variable investment is dependent, and through the remaining errors of the investment efficiency model (Biddle et al., 2009), the following is obtained.

$$Investment_{i,t} = \beta_0 + \beta_1 SalesGrowth_{i,t-1}$$

Investment: Net increase in total non-current assets of the company.

Sales Growth: Growth in company sales compared to the previous period.

### 3. Findings and Results

Descriptive statistics of the main variables of this research are presented in Table 2. The dependent variable is the effective tax rate, which indicates that the effective tax rate (tax avoidance) in Iraq is on average higher than in Oman. Considering the independent variables, asset returns and company growth are higher in Oman compared to Iraq, leading to the conclusion that Omani companies have higher profitability and growth compared to those in Iraq. The control variables are CEO characteristics, namely tenure, ability, and CEO confidence. Throughout the research period, managers of companies in Iraq and Oman have registered similar statuses in these variables. Earnings management, which is the variable being adjusted in the research, is slightly higher in Oman than in Iraq. Among the control variables, the qualitative variable of CEO gender indicates that female CEOs are very limited in Oman, while no female CEOs were found in Iraqi stock exchange-listed companies.

**Table 2.** Descriptive statistics of main variables

Varbilae	Oman				Iraq			
	Mean	Median	Min	Max	Mean	Median	Min	Max
ETR	-0.123	-0.137	-0.234	-0.000	-0.043	-0.027	-0.214	-0.000
Narcissism	2.000	2.000	1.000	3.000	2.000	2.000	1.000	3.000
ROA	0.115	0.054	-0.106	0.748	0.085	0.039	-0.698	0.794
EM	0.125	0.159	0.001	1.156	0.195	0.186	0.000	1.379
Growth	0.341	0.131	-0.989	0.285	0.141	0.041	-1.029	1.395
LEV	0.546	0.532	0.023	1.321	0.325	0.262	0.019	1.395
R&D	0.015	0.003	0.000	0.009	0.001	0.0030	0.000	0.006
Bsize	1.992	1.946	1.945	2.397	1.998	1.386	1.609	2.197
Fsize	16.074	14.587	12.632	20.264	22.614	22.577	19.236	27.223
CEOage	3.936	3.954	3.617	4.231	3.816	3.804	3.617	4.141
ability	0.012	0.002	-0.379	0.973	0.032	0.019	-0.498	0.934
Overconfidence	0.006	-0.022	-0.094	1.813	-0.005	-0.025	-0.118	1.764
Tenure	3.111	3.000	1.000	8.000	3.144	3.000	1.000	8.000

**Table 3.** Descriptive statistics of qualitative variables

Varbilae	Status	Iraq	Oman
		Percentage %	Percentage %
Duality	0	88.90	72.25

	1	11.10	27.75
	Total	100.00	100.00

Table 4 and 5 presents the correlation analysis of research variables. The results demonstrate a positive correlation between Narcissism, ROA, EM and Growth with ETR at the 99% confidence level (coefficient: 0.001).

**Table 4.** Correlation analysis of research variables(Oman).

	ETR	Nar rci ssi sm	RO A	E M	Gro wth	R & D	Bsi ze	Fsi ze	CEOage	abilit y	Overconf idence	Gender	Duality	lev	Tenure
ETR	1														
Narcis sism	0.609 ***	1													
ROA	0.663 ***	-	1												
EM	0.207 ***	0.2 79 ***	-	1											
Growt h	0.337 ***	-	-	-	1										
R&D	-	-	0.2 10 ***	0.1 53 **	-	1									
Bsize	-	0.2 16 ***	0.0 19	-	0.03 4 0.2 43 *	-	1								
Fsize	0.067	0.0 37	0.0 105	0.1 98	0.04 1	0.0 42	0.0 41	1							
CEOa ge	0.068	-	0.3 77 ***	-	-	0.2 17 ***	-	0.0 43	1						
ability	0.024	0.0 15 25	-	0.0 67 3	-	0.0 50 17 27 ***	0.0 17 27	0.037	1						
Overc onfide nce	0.109	0.1 33 *	-	0.2 89 ***	-	0.1 06 8	-	-	0.065	-	1				
Dualit y	0.056	0.1 33 *	-	0.2 12 ***	-	0.1 29 8	-	-	0.056	-	0.020	-0.143 *	1		
lev	0.058	0.1 33 *	-	0.2 67 ***	-	0.1 35 1	-	-	0.078	-	0.210 ***	0.253 **	0.034	1	
Tenur e	0.058	0.1 33 *	-	0.2 67 ***	-	0.1 35 1	-	-	0.078	-	0.210 ***	0.253 **	0.279 ***	-0.140 *	1

\*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.



**Table 5.** Correlation analysis of research variables(Iraq).

	ETR	Narcissism	ROA	EM	Growth	R&D	Bsize	Fsize	CEOage	ability	Overconfidence	Duality	lev	Tenure
ETR	1													
Narcissism	0.512***	1												
ROA	0.581***	-0.040	1											
EM	0.238***	0.239***	-0.145*	1										
Growth	0.409***	-0.052	-0.076	-0.293***	1									
R&D	-0.04607	-0.0307***	0.110***	0.167**	-0.0012	1								
Bsize	-0.064	0.224***	0.015	-0.178*	0.009	-0.002	1							
Fsize	0.089	0.047	0.016	0.293*	0.072	0.073	0.045	1						
CEOage	0.145	-0.078	0.315***	-0.067	-0.0036	0.283***	-0.0023	0.056	1					
ability	0.024	0.017	-0.043	0.054	-0.0077	0.061	0.239***	0.038	0.036	1				
Overconfidence	0.103	0.144*	-0.12	0.232***	-0.108	0.149	-0.24	-0.059	0.084	-0.081	1			
Duality	0.034	0.156*	-0.16	0.214***	-0.125	0.139	-0.23	0.078	0.039	-0.091	0.034	1		
lev	0.076	0.178*	-0.34	0.233***	-0.162	0.159	-0.54	0.094	0.048	-0.042	0.073	0.036	1	
Tenure	-0.115	0.124*	-0.56	0.233***	-0.136	0.139	-0.82	0.31	0.071	-0.027	0.069	-0.143*	0.027	1

\*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

All variables are stable, as illustrated by the fact that the significance level is less than 0.05 in the table above.

**Table 6.** The results of Levin, Lin Vecho's unit root test for the analysis of stability

Variable	p-value
ETR	0.000



Narcissism	0.000
ROA	0.043
EM	0.000
Growth	0.000
R&D	0.000
Bsize	0.000
Fsize	0.000
CEOage	0.000
ability	0.000
Overconfidence	0.000
Duality	0.000
lev	0.000
Tenure	0.000

This study employed the Durbin and Wu–Hausman test to test endogeneity. The results of this test for research equations are reported in Table 7 and 8. Since the p-value is larger than 0.05, there is no endogeneity for the all models..

**Table 7.** Results of Durbin–Wu–Hausman test(Oman)

Equation	Test	$\chi^2$	p-value	Result
1	Durbin	$\chi^2 = 1.764$	0.423	H0 is rejected (there is no endogeneity)
	Wu-Hausman	F=0.921	0.512	H0 is not rejected (there is no endogeneity)
2	Durbin	$\chi^2 = 1.724$	0.463	H0 is rejected (there is no endogeneity)
	Wu-Hausman	F=0.906	0.525	H0 is not rejected (there is no endogeneity)
3	Durbin	$\chi^2 = 1.802$	0.352	H0 is rejected (there is no endogeneity)
	Wu-Hausman	F=0.987	0.463	H0 is not rejected (there is no endogeneity)

**Table 8.** Results of Durbin–Wu–Hausman test(Iraq)

Equation	Test	$\chi^2$	p-value	Result
1	Durbin	$\chi^2 = 1.700$	0.487	H0 is rejected (there is no endogeneity)
	Wu-Hausman	F=0.892	0.549	H0 is not rejected (there is no endogeneity)
2	Durbin	$\chi^2 = 1.822$	0.339	H0 is rejected (there is no endogeneity)
	Wu-Hausman	F=0.961	0.471	H0 is not rejected (there is no endogeneity)
3	Durbin	$\chi^2 = 1.721$	0.467	H0 is rejected (there is no endogeneity)
	Wu-Hausman	F=0.901	0.520	H0 is not rejected (there is no endogeneity)

In accordance with the integration test results in Table 9 and 10, the null hypothesis of data integration at the 99% confidence level is rejected. Therefore, a panel data model should be utilized to estimate the coefficients of these models.

**Table 9.** The results of pooling(Oman).

Equation	F Statistic	p-value
1	2.06	0.000
2	2.50	0.000
3	1.65	0.032

**Table 10.** The results of pooling(Iraq).

Equation	F Statistic	p-value
1	4.94	0.000
2	4.80	0.000
3	4.24	0.000

In Table 11, the Hausman test statistics are 8.17, 10.99 and 9.45. For the all research models in Oman, since the table's is greater and the null hypothesis (i.e., the proper model is the random effect model) is not rejected, the efficient model is the random-effects model.

**Table 11.** The results of the Hausman test(OMAN)

Equation	$\chi^2$ Statistic	p-value
1	8.17	0.819
2	10.99	0.610
3	9.45	0.803

In Table 12, the Hausman test statistic for first model is 15.78. For first research models in Iraq, since the table's is greater and the null hypothesis (i.e., the proper model is the random effect model) is not rejected, the efficient model is the random-effects model. however, for second and third model since the table's is not greater and the null hypothesis (i.e., the proper model is the Fixed- effects model) is rejected, the efficient model is the Fixed- effects model

**Table 12.** The results of the Hausman test(Iraq)

Equation	$\chi^2$ Statistic	p-value
1	15.78	0.269
2	24.02	0.027
3	32.45	0.002

**Table 13.** The results of the first model

Variable (ETR)	GLS Regression					GLS Regression			
	Equation (Oman):					Equation (Iraq):			
	Coef	Std. Err	Statistic t	Prob	VIF	Coef	Std. Err	Statistic t	Prob

Narcissism	0.035***	0.007	4.598	0.000	1.183	0.021***	0.007	4.220	0.000	
ROA	0.226***	0.029	7.720	0.000	1.121	0.222***	0.027	8.180	0.000	
Growth	0.026***	0.005	5.102	0.000	1.367	0.019***	0.004	3.985	0.000	
R&D	0.424	0.412	1.029	0.304	1.083	-0.016	0.074	-0.220	0.824	
Bsize	-0.063	0.050	-1.269	0.205	1.137	-0.011	0.028	-0.390	0.696	
Fsize	0.003	0.003	1.048	0.295	1.231	-0.001	0.005	-0.027	0.978	
CEOage	-0.036	0.039	-0.908	0.364	1.069	0.056	0.025	2.196	0.029	
ability	0.052**	0.027	1.949	0.052	1.083	0.008	0.018	0.484	0.628	
Overconfidence	-0.001	0.001	1.084	0.279	1.089	-0.027	0.026	-1.025	0.306	
Duality	0.037***	0.012	3.520	0.000	1.083	0.047***	0.014	3.320	0.001	
lev	0.009	0.019	0.482	0.630	1.089	-0.040***	0.010	-3.780	0.002	
Tenure	-0.006**	0.002	-2.516	0.012	1.148	-0.004**	0.002	-2.216	0.027	
_cons	0.400	1.180	0.340	0.735	---	0.811	2.055	0.390	0.694	
$\chi^2$ Statistic	46.35(0.000)						18.1942(0.026)			
R <sup>2</sup>	0.639						0.594			
Adjusted R <sup>2</sup>	0.607						0.570			
Durbin-Watson Statistic	1.654						1.734			
AIC	861.46						792.156			

As Table 13 shows and based on the VIF values, it is evident that the independent variables are not collinear. Because every VIF value is less than 5, the results of fitting the research model are presented. It is observed that CEO narcissism and asset returns (independent variables) have coefficients of 0.30 and 2.20, respectively, and are significantly positively related to tax avoidance in Oman with a significance level of 0.00. Therefore, the first and second hypotheses of the research are accepted in Oman at a 95% confidence level. The adjusted coefficient of determination in Oman indicates that 41% of the variations in the dependent variable are explained by the independent variables in the model.

As Table 13 shows and based on the VIF values, it is evident that the independent variables are not collinear. Because every VIF value is less than 5, the results of fitting the research model are presented. It is observed that CEO narcissism and asset returns (independent variables) have coefficients of 0.20 and 2.20, respectively, and are significantly positively related to tax avoidance in Iraq with a significance level of 0.00. Therefore, the first and second hypotheses of the research are accepted in Iraq at a 99% confidence level. The adjusted coefficient of determination in Iraq indicates that 55% of the variations in the dependent variable are explained by the independent variables in the model.

**Table 14.** The results of the second model

Variable (ETR)	GLS Regression					FGLS Regression			
	Equation (Oman):					Equation (Iraq):			
	Coef	Std. Err	Statistic t	Prob	VIF	Coef	Std. Err	Statistic t	Prob
Narcissism	0.082***	0.007	11.409	0.000	2.345	0.071***	0.006	10.622	0.000
EM	0.040	0.055	0.721	0.471	2.123	-0.272**	0.108	-2.514	0.012
EM* Narcissism	-0.017	0.024	-0.748	0.455	2.367	0.102**	0.047	2.146	0.033
R&D	0.432	0.412	1.009	0.344	1.034	-0.035	0.087	-0.398	0.690
Bsize	-0.056	0.052	-1.074	0.285	1.145	0.006	0.039	0.159	0.873
Fsize	0.004	0.003	1.253	0.211	1.234	0.023*	0.012	1.857	0.068
CEOage	-0.062	0.046	-1.352	0.177	1.231	0.040	0.032	1.248	0.213
ability	0.028**	0.032	0.877	0.381	1.234	0.020	0.022	0.946	0.345

Overconfidence	0.031	0.032	0.965	0.335	1.234	-0.014	0.031	-0.456	0.650	
Duality	0.027**	0.014	1.945	0.053	1.032	0.043**	0.017	2.534	0.012	
lev	0.019	0.022	0.886	0.376	1.123	-0.034**	0.015	-2.187	0.029	
Tenure	-0.008***	0.003	-2.617	0.009	1.165	-0.005**	0.002	-2.220	0.027	
_cons	-0.018	0.225	-0.080	0.935	---	-0.899	0.328	-2.741	0.006	
$\chi^2$ Statistic	12.084(0.000)						8.0867(0.000)			
R <sup>2</sup>	0.447						0.609			
Adjusted R <sup>2</sup>	0.410						0.557			
Durbin-Watson Statistic	1.543						1.799			
AIC	806.46						732.106			

\*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

As Table 14 shows and based on the VIF values, it is evident that the independent variables are not collinear. Because every VIF value is less than 5. in Oman, the coefficient of CEO Narcissism \* Earnings Management (EM) is significant at the level of 0.455. Therefore, the third hypothesis of the research is rejected for Oman at a 90% confidence level. The adjusted coefficient of determination in Oman indicates that 41% of the variations in the dependent variable are explained by the independent variables in the model.

As Table 14 shows and based on the VIF values, it is evident that the independent variables are not collinear. Because every VIF value is less than 5. in Iraq, the coefficient of CEO Narcissism \* Earnings Management (EM) is significant at the level of 0.03. Therefore, the third hypothesis of the research is accepted for Iraq at a 95% confidence level. Since the coefficient of the variable with the independent variable is positive, earnings management moderates the relationship between CEO narcissism and tax avoidance in Iraq in the positive direction, enhancing the relationship. The adjusted coefficient of determination in Iraq indicates that 55% of the variations in the dependent variable are explained by the independent variables in the model.

**Table 15.** The results of the third model

Variable (ETR)	GLS Regression					FGLS Regression			
	Equation (Oman):					Equation (Iraq):			
	Coef	Std. Err	Statistic t	Prob	VIF	Coef	Std. Err	Statistic t	Prob
ROA	0.351***	0.027	12.889	0.000	2.677	0.313***	0.025	12.498	0.000
EM	-0.009	0.026	-0.374	0.708	2.245	-0.037	0.025	1.043	0.296
EM* ROA	0.015	0.100	0.149	0.881	2.543	0.007	0.091	0.079	0.936
R&D	0.468	0.476	0.982	0.326	1.187	0.006	0.082	0.073	0.941
Bsize	-0.078	0.052	-1.493	0.137	1.123	0.023	0.037	0.623	0.534
Fsize	0.001	0.003	0.325	0.745	1.675	-0.005	0.011	-0.419	0.675
CEOage	0.008	0.043	0.189	0.849	1.334	0.040	0.032	1.248	0.213
ability	0.075**	0.030	2.433	0.015	1.456	0.020	0.022	0.946	0.345
Overconfidence	0.031	0.030	1.041	0.299	1.772	-0.030	0.029	-1.034	0.302
Duality	0.011	0.013	0.871	0.384	1.345	0.034**	0.016	2.114	0.035
lev	0.008	0.021	0.389	0.697	1.223	-0.057***	0.014	-3.937	0.000
Tenure	-0.005***	0.003	-1.677	0.095	1.156	-0.006***	0.002	-2.665	0.008
_cons	0.052	0.221	0.236	0.813	---	-0.176	0.308	-0.559	0.576
$\chi^2$ Statistic	14.64(0.000)					9.8142(0.000)			
R <sup>2</sup>	0.513					0.671			
Adjusted R <sup>2</sup>	0.479					0.634			

Durbin-Watson Statistic	1.703	1.509
AIC	654.46	702.103

\*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

As Table 15 shows and based on the VIF values, it is evident that the independent variables are not collinear. Because every VIF value is less than 5. in Oman, the coefficient of ROA\*EM is significant at the level of 0.881. Therefore, the fourth hypothesis of the research is rejected for Oman at a 95% confidence level. The adjusted coefficient of determination in Oman indicates that 47% of the variations in the dependent variable are explained by the independent variables in the model.

As Table 15 shows and based on the VIF values, it is evident that the independent variables are not collinear. Because every VIF value is less than 5. in Iraq, the coefficient of ROA\*EM is significant at the level of 0.936. Therefore, the fourth hypothesis of the research is rejected for Iraq at a 95% confidence level. The adjusted coefficient of determination in Oman indicates that 63% of the variations in the dependent variable are explained by the independent variables in the model

#### 4. Discussion and Conclusion

The Impact of CEO Narcissism, Firm Performance, and Company Growth on Tax Avoidance: Emphasizing the Role of Earnings Management in Listed Companies on the Stock Exchanges of Iraq and Oman

The findings of this study provide valuable insights into the relationship between CEO narcissism, firm performance, company growth, and tax avoidance in the context of listed companies on the stock exchanges of Iraq and Oman. Here, we summarize and discuss the key findings and implications of our research.

Our study reveals a significant positive effect of CEO narcissism on tax avoidance in both Iraq and Oman. This suggests that CEOs with narcissistic tendencies are more likely to engage in tax avoidance strategies, possibly driven by their desire for personal gain and admiration. The findings align with previous research highlighting the influence of CEO characteristics on corporate decision-making, including tax management practices.

We also find that firm performance has a positive and significant impact on tax avoidance in both Iraq and Oman. This indicates that companies with higher performance levels tend to engage in tax avoidance strategies, possibly to maximize profits and maintain competitive advantages. The results underscore the importance of considering firm performance metrics when analyzing tax-related behaviors in listed companies.

In Iraq, our study demonstrates that earnings management strengthens the relationship between CEO narcissism and tax avoidance. This implies that CEOs with narcissistic traits may be more inclined to manipulate earnings to achieve their financial objectives, including tax minimization. However, earnings management does not moderate the relationship between firm performance and tax avoidance in both Iraq and Oman. This suggests that while earnings management may play a role in amplifying the impact of CEO narcissism on tax avoidance, it does not similarly influence the relationship between firm performance and tax management strategies.

The findings of this study have several implications for corporate governance, regulatory oversight, and future research. Firstly, our results highlight the importance of considering CEO characteristics, such as narcissism, in understanding corporate tax behaviors. Boards of directors and regulatory authorities should be aware of the potential influence of CEO personality traits on tax management decisions and implement appropriate monitoring mechanisms.

Secondly, the positive association between firm performance and tax avoidance underscores the need for vigilant oversight to prevent abusive tax practices in high-performing companies. Regulatory reforms and transparency initiatives may help mitigate the risks associated with aggressive tax planning strategies.

Lastly, the role of earnings management in shaping the relationship between CEO narcissism and tax avoidance suggests avenues for further investigation. Future research could explore additional factors influencing the effectiveness of earnings management in mitigating or exacerbating tax avoidance behaviors.

In conclusion, our study contributes to the understanding of the complex interplay between CEO characteristics, firm performance, earnings management, and tax avoidance in the context of listed companies in Iraq and Oman. By shedding light on these dynamics, our findings provide valuable insights for policymakers, practitioners, and scholars aiming to promote ethical corporate behavior and effective tax governance

### **Authors' Contributions**

Authors equally contributed to this article.

### **Ethical Considerations**

All procedures performed in this study were under the ethical standards.

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### **Conflict of Interest**

The authors report no conflict of interest.

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