

The Impact of Deferred Tax on Earnings Quality: Evidence from Algerian Companies

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Abstract: *This paper aims to investigate the impact of deferred tax, as a technique adopted to support the economic orientation of financial statements over their legal form, on earnings quality as a required attribute to achieve the objective of financial reporting. The study used the model of Sloan (1996) through 280 firm-year observations that concern 40 Algerian companies from 2013 to 2019. Employing persistence and predictive ability as proxies for earnings quality, the results indicated that earnings of Algerian companies present a high level of persistence and a weak level of predictive ability. However, the deferred tax does impact neither the persistence of earnings nor their predictive ability. Therefore, accounting regulators in Algeria must simplify accounting for the deferred tax to encourage its application by companies and improve earnings quality.*

Keywords: Earnings quality; Earnings persistence; Earnings predictive ability; Deferred tax; Algerian companies

JEL Classification: M40, M41

Introduction

Earnings quality as a proxy for financial reporting quality was the subject of widespread literature that discusses different aspects of it as a result of the rising interest given by accounting standardization bodies (Penman and Zhang, 2002; Dechow and Schrand, 2004; Dechow, Ge and Schrand, 2010; Dridi and Adel, 2016; An, 2017; Licerán-Gutiérrez and Cano-Rodríguez, 2019). The quality of financial reporting means that financial statements summarize useful information, which allows the users to assess the company's current performance and expect its future perspectives (IASB, 2018a; Kimouche, 2021a).

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The conceptual framework of IASB (2018a) was kept up with the new role of financial accounting, requiring two attributes to achieve relevance: predictive and confirmatory value. The literature has widely incorporated the concept of relevance in the earnings quality indicators, like persistence and predictive ability (Hanlon, 2005; Atwood, Drake and Myers, 2010; Kordestani, Taqiporian, Biglari and Minaei, 2016), which measures the extent to which current information is reflected in future performance and cash flows. Thereby, persistence and predictive ability have become the main determinants of earnings quality.

The persistence and predictive ability are affected by many items, especially accounting accruals, as they are more likely to be managed. Deferred tax is a part of accruals that is expected to affect earnings persistence and their predictive ability since it constitutes the tax expense or income for the period besides the current tax (IASB, 2018b). Therefore, the recognition and measurement of deferred tax can change the informational content of earnings and their future perception (Beaver and Dukes, 1972; Joos, Pratt and Young, 2000; Foster and Ward, 2007; Hanlon, Maydew and Shevlin, 2008; Blackburne and Blouin, 2017).

Like all transition countries, Algeria has known revolutionary changes since the beginning of the 1990s at the economic and institutional levels in order to shift from socialism to capitalism, hence liberalizing trade and business. Therefore, many reforms have been required, especially in terms of corporate governance, so an accounting reform has commenced in Algeria since the end of the 1990s. The main objective of that accounting reform is to improve the quality of financial statements and respond effectively to the users' needs in the new economic environment.

The new accounting reference in Algeria inferred from IAS/IFRS and adopted since the beginning of 2010 has introduced many improvements in the form and content of financial statements. Accounting for deferred tax is the main change derived from the new accounting reference in Algeria as deferred tax has not been previously recognized in the financial statements of Algerian companies.

This paper investigates whether the adoption of deferred tax with the 2010's accounting reform has impacted earnings quality in Algerian companies. Earnings quality was measured by the persistence and predictive ability of earnings as required attributes for the relevance of financial information. The study used the model of Sloan (1996), employing 280 firm-year observations for 40 Algerian companies during the period 2013-2019.

According to the results, earnings of Algerian companies present a high level of persistence whether with or without deferred tax, while they present a weak level of predictive ability whether with or without deferred tax. The deferred tax has a neglected negative effect on earnings persistence and a neglected negative effect on earnings predictive ability in Algerian companies. Consequently, we concluded that deferred tax has no impact on earnings quality in Algerian companies. We expect that the results of this study have practical implications for accounting regulators

in Algeria by providing empirical evidence about the achievements of accounting reform and the perspectives of future actions in this regard.

The remainder of this paper is structured as follows: Section 1 reviews the literature; Section 2 presents the previous empirical studies; Section 3 sets the research design; Section 4 summarizes and discusses the results.

Literature review

Earnings quality

Literature defined earnings quality from different perspectives according to the expectations of stakeholders. Dechow and Schrand (2004) focused on the analyst perspective in which high-quality earnings that accurately reflect the company's current performance is a good indicator for future performance. The earlier literature referred to such earnings as "permanent earnings", while the commonly used term is "earnings persistence" (Kimouche, 2020). According to Dechow and Schrand (2004), earnings that represent the annuity of expected future cash flows are likely to be persistent and have predictive ability.

Dechow and Schrand (2004) reported that earnings with high quality provide more information about the company's financial performance features that are pertinent to a specific decision made by a user. However, earnings quality can be appreciated by many proxies that are categorized under many groups. These categories reflect the characteristics of earnings and the characteristics of users in a specific environment. The characteristics of earnings remain the main determinants of earnings quality as they contain the necessary attributes for decision making, like persistence and predictive ability (Kimouche, 2021b).

Earnings persistence is an attribute of earnings that helps investors to assess the future performance of companies (Kordestani *et al.*, 2016); it refers to how many current earnings will persist into the future and continue from period to period (An, 2017). The definition of persistence means that current earnings are a base for predicting future earnings (Kimouche, 2021c). This idea was the subject of many studies, starting from the 1950s with Graham and Dodd (1951), and was extended later with widespread literature. According to Penman and Zhang (2002), earnings persistence is a good indicator of earnings quality because high-quality earnings are predictable and sustainable. Sun (2010) suggested that high persistence earnings are an ideal characteristic to reduce risks in assessing the company's value.

Predictive ability is another characteristic of earnings widely used as a proxy for earnings quality and is much related to persistence since earnings with high predictive ability are likely to be more persistent (Dechow and Schrand, 2004). Otherwise, sustainable profits can predict better future cash flows. The predictive ability measu-

res the power of current earnings to reflect future operating cash flows, even if they are not persistent. Users have confirmed that predictive ability is a desired attribute of financial reporting (Dechow and Schrand, 2004), so the predictive ability of earnings time-series is a conjunctive variable of financial statements quality and the accounting system used to measure them (Barth, 2000; Dechow *et al.*, 2010).

Earning is widely used by analysts in companies' valuation (Kabir and Laswad, 2011), so persistence and predictive ability are preferred attributes of earnings. The conceptual framework for financial reporting noted that information about the company's financial performance during a period helps assess the company's ability to generate future cash flows (IASB, 2018a). On the other hand, persistence is often evaluated by financial markets because sustainable earnings are an indicator of the management's success in employing the company resources and a good signal for its future perspectives taken into consideration by investors when evaluating the company.

Deferred tax

Tax expense (income) for a period is the amount of current tax, adjusted by the amount of deferred tax; it consists of the current tax burden (income) and deferred tax expense (income) (IASB, 2018b). The current tax burden is neutral because it is out of the company's control since is determined by the tax administration using tax regulations, including the Income Tax Law and other related regulations. However, the deferred tax is under the control of the company as determined by the generally accepted accounting standards. The deferred tax appears as a result of the differences between the tax regulations and accounting standards in the recognition and measurement of events and items. Those differences are called Book-tax differences and can be grouped into permanent and temporary differences.

Permanent differences are the result of differences in recognizing income and expenses between accounting standards and tax regulations. The permanent difference causes a difference in net income before tax with taxable income, but it is not a subject of deferred tax recognition. However, temporary or time differences are caused by differences in time and rules of recognizing income and expenses based on accounting standards comparing tax regulations. The temporary differences are subject to deferred tax recognition, and they arise as a logical consequence of differences in standards or provisions relating to the recognition and measurement of the elements of financial statements that apply in tax accounting compared with those that apply in financial accounting (Sulistianingsih, 2019, p. 79).

Temporary book-tax differences lead to recognition of either a deferred tax asset or liability. The deferred tax asset arises from the temporary book-tax differences that are deductible in the future, leading to future tax reductions in the counterpart of any deferred tax income recognized in the current period. Otherwise, the deferred tax liability arises from the temporary book-tax differences that are taxable in the

future, generating future tax payments in the counterpart of any deferred tax expense for the current period. Subsequently, deferred tax for the period is the sum of deferred tax expense and deferred tax income.

Deferred tax is a technique developed to take into consideration the temporary book-tax differences in financial statements based on the substance over form principle, stipulating that when the economic substance of an event diverges from its legal form, the economic substance must lead the accounting treatment of such event. The deferred tax can also be justified by the accrual basis and the time period principle, where events must be recognized and recorded in the period in which they occur. However, according to tax regulations, taxes must be recognized in the period in which they are paid.

Deferred taxes are a construct of financial reporting. The purpose of accounting for deferred tax is to measure and recognize future tax effects arising due to the different accounting policies and methods versus the tax law rules. Deferred tax accounting is a result of the matching principle, which aims to record the tax consequences of an item recognized within the financial statements in the same year period of that item itself (Chludek, 2011, p. 18). Deferred tax accounting can follow the asset/liability method, as required by the IAS/IFRS. However, Algerian accounting reference prefers the deferred method as an income statement-oriented approach that seeks to match expenses with revenues in the period in which the temporary book-tax differences originated.

Deferred tax and earnings quality

From a historical view, the recognition of deferred taxes can be justified by compliance with certain accounting assumptions and principles that seek to provide a relevant and faithful representation of assets and liabilities (Harumova, 2016, p.3). Using deferred taxes can approximate earnings from the economic income concept as presumed by the substance over form principle. It also can make financial statements more prudent, timelier, and more consistent, thus improving the usefulness of financial information for decision-making.

According to Givoly and Hayn (1992), investors view deferred tax liability as a real liability; it appears to discount consistent with the timing and likelihood of the liability's settlement. Some studies found that the information assimilated in book-tax differences is associated with earnings quality and affects the market's response to current and expected future earnings (Tang, 2006). Dridi and Adel (2016) suggested that book-tax differences provide useful incremental information about the quality of earnings.

Several studies did not agree with the presumed role of deferred taxes. Beaver and Dukes (1972) found that the unexpected stock returns are more correlated with the unexpected earnings measures that include tax deferrals than with unexpected ear-

nings measures that do not. These findings have recently been confirmed by Chaney and Jetter (1994), who found a negative association between deferred tax expenses and stock returns, and Joos *et al.* (2000), who reported that returns are less associated with earnings when the company has large book tax-differences. In the same context, Comprix, Graham and Moore (2011) found that the book-tax differences are positively associated with market uncertainty.

Companies with large book-tax differences present less persistent earnings and accruals comparing companies with small book-tax differences (Xie, 2001). Besides that, book-tax differences can be a sign of accruals management because there is less discretion when applying tax rules (Hanlon, 2005). Contrarily, Guenther (2011) revealed that when controlling variables for age, large transitory items, large accruals, and high levels of pre-tax ROA, there is no longer a statistically significant association between large book-tax differences and lower earnings persistence.

Other studies focused on book-tax conformity for companies forced to change from the cash method to the accrual method for tax purposes. Hanlon *et al.* (2008) found that the increase in book-tax conformity decreases the informativeness of earnings. Atwood *et al.* (2010) also suggested that increased book-tax conformity may reduce earnings quality.

Many recent studies have been concerned with the role of book-tax differences in detecting discretionary accounting practices (Hanlon, 2005; Wilson, 2009; Kvaal and Nobes, 2012; Tang and Firth, 2011). The findings confirmed that these differences can signal managerial manipulations; it can be an effective attribute of earnings quality (Hanlon, 2005; Blaylock, Shevlin and Wilson, 2012). According to Tang (2006), book-tax differences determine the quality of earnings because they indicate the opportunistic practices that distort the financial statements. Finally, Mills and Newberry (2001) found that book-tax differences have an informational value that can reflect the existence of managerial manipulation.

Previous empirical studies

Amir, Kirschenheiter and Willard (1997) examined the value relevance of deferred tax components disclosed under the SFAS No. 109 by categorizing deferred tax components into seven elements: amortization and depreciation, credits and losses carried forward, restructuring costs, environmental costs, employee benefits, valuation allowance imposed by the SFAS No. 109, and all other components. Using 1,114 firm-year observations that concern all public Fortune 500 companies during 1992-1994, the results showed that separating deferred taxes into components provides value relevant information.

Hanlon (2005) examined the role of book-tax differences in determining the persistence of earnings, accruals, and cash flows and whether they affect the investors'

assessments of future earnings persistence. Using 14,106 firm-year observations from CRSP and Compustat during 1994-2000, the results revealed that firm-years with large book-tax differences have less persistent earnings than firm-years with small book-tax differences. Further, the evidence was consistent with the investors' interpretation that views large positive book-tax differences as a "red flag" that reduces their future expectation of earnings persistence.

Foster and Ward (2007) employed the predictability of future taxes paid and future cash flows as bases to assess the usefulness of inter-period tax allocation. Using 31,620 observations from Compustat during the period 1994-2000, the results provided very little evidence that deferred tax measures are useful in predicting one-period-ahead taxes paid or operating cash flow when added to the models that include taxes paid. Therefore, deferred tax information did not satisfy the usefulness criteria set out by the FASB for reporting standards when used to predict one-period-ahead cash flows.

Chludek (2011) investigated whether deferred tax information serves its main purpose to inform about the future tax cash flows, using panel data over 16 years. The results show that deferred taxes have short-term cash flows implications, while the estimated magnitude of these implied cash flows is small. Furthermore, the deferred tax coefficient is not significant for explaining the future cash flows for more than 67% of the sample.

Blaylock *et al.* (2012) investigated why temporary book-tax differences served as a useful signal of earnings persistence, using 21,043 observations from Compustat and CRSP during 1995-2005. They found that companies with large positive book-tax differences likely arising from upward earnings management (tax avoidance) present lower (higher) persistence of earnings and accruals than do other companies.

Kasipillai and Mahenthiran (2013) examined whether Malaysian public listed companies avoid the decline of earnings using deferred taxes and whether governance mechanisms reduce the extent to which deferred taxes are used to manage earnings. Using a sample of 221 listed companies during 2005-2008, they found that companies use both the accrual and valuation allowance components of net deferred tax liabilities to avoid any decline in earnings. They also found that ownership and board structure have a remarkable impact on the level to which earnings management is correlated with deferred tax.

Martinez, Souza and Monte-Mor (2015) tried to provide evidence about the relationship between book-tax differences, the persistence of earnings and accruals, and tax planning in Brazil before and after the IAS/IFRS adoption. The sample included all industrial and commercial companies listed on the BMF&Bovespa that disclose consolidated financial statements during 2003-2012. The results indicated a less persistence of earnings after the IAS/IFRS adoption and provided evidence that temporary large positive book-tax differences provide useful incremental information about the magnitude of accruals.

Dridi and Adel (2016) investigated whether the persistence of earnings, accruals, and cash flows are affected by the difference between accounting and taxable income (book-tax differences) and whether discretionary book-tax differences appear as a relevant signal for earnings persistence. They used the discretionary share of book-tax differences to measure opportunistic managerial behaviour. They tested the model with a sample of 21 listed Tunisian companies from 2003 to 2012. The results showed the importance of book-tax differences in determining the persistence of earnings and accruals.

Dreher, Eichfelder and North (2017) analyzed the pertinence of accounting information about tax loss carry forwards and deferred taxes to predict earnings and cash flows up to four years ahead. The results showed that accounting information on tax loss carry forwards and deferred taxes did not enhance the accuracy of performance forecasts and can even worsen performance predictions.

Blackburne and Blouin (2017) tried to understand the specifics of the information contained in book-tax differences by illustrating the statistical relations found in the literature between book-tax differences, earnings growth and persistence. The study employed 32,230 firm-year observations during 2001-2012 from the Compustat database and used a series of counterfactual tests and simulation analyses. The results showed that the information contained in book-tax differences is likely to derive from uncorrelated measurement errors in accounting systems for book and taxable income.

Adiati *et al.* (2018) explored the effect of deferred tax and accruals on earnings persistence, using 1,609 firm-year observations from Indonesia during 2007-2014. According to the results, deferred tax and accruals have negative effects on earnings persistence, even after controlling the model for industry sector dummy variables and year dummy variables and splitting the sample into positive and negative accruals. However, after splitting the sample into positive and negative deferred tax, the results showed the negative effect of deferred tax on earnings persistence only for the positive deferred tax subsample.

Hardiningsih, Hadi and Ariani (2019) examined the effect of earnings and tax aggressiveness on earnings persistence. The study included 68 companies from the consumer goods industry sector. The analysis technique used pure MRA with an interaction basis. The results showed that earnings and tax aggressiveness affect earnings persistence positively, and corporate governance strengthens that effect.

Hong and Shim (2019) examined the effects of the IAS 12 adoption on the incremental information about future profitability for companies reporting losses compared to Korean-GAAP 16. Using 2,905 observations from the Korean listed companies that reported a loss during 2007-2014, they divided loss firm-years into 'good' and 'bad' news based on whether management appears to report an increase in deferred tax assets. According to the results, tax categories have incremental information about the probability of loss reversal under Korean GAAP 16, but under IAS 12, the incremental effects disappear.

According to the literature, a divergence exists between the results of studies about the impact of deferred tax on earnings quality. However, there is a trend towards the negative effect of deferred tax on the value relevance and persistence of earnings as a result of earnings management using temporary book-tax differences. Otherwise, the findings of other studies view the large temporary book-tax differences as a signal of managerial manipulations, and thus an attribute of earnings quality.

The contribution of this study stems from the failure of previous studies that focused on the impact of deferred tax on earnings management and the value relevance of earnings, while this study investigates the persistence and predictive ability of earnings. Additionally, the majority of literature studied the impact of deferred tax on earnings quality in developed or emerging environments, while this study carries out in Algeria as a developing country.

Hypotheses

This study starts from the following hypotheses:

Hypothesis1: deferred tax affects positively earnings persistence in Algerian companies.

Hypothesis2: Deferred tax affects positively the predictive ability of earnings in Algerian companies.

Research Design

The study followed a descriptive approach by selecting some Algerian companies and then using the statistical method to test the hypothesis.

Model specification

The study model starts from the model of Sloan (1996), which relates the one-ahead-period earnings with current earnings to measure the persistence of earnings. That model is also used to measure the predictive ability of earnings by relating one-period-ahead cash flows with current profits. However, we measured the persistence and predictive ability of earnings before the deferred tax depending on Equation (1) and Equation (3), respectively, and after the deferred tax depending on Equation (2) and Equation (4), respectively.

$$NIDT_{it+1} = \alpha_1 + \beta_1 NIDT_{it} + \varepsilon_{it} \quad (1)$$

$$NI_{it+1} = \alpha_2 + \beta_2 NI_{it} + \gamma_2 DT_{it} + \zeta_{it} \quad (2)$$

$$OCF_{it+1} = \alpha_3 + \beta_3 NIDT_{it} + \delta_{it} \quad (3)$$

$$OCF_{it+1} = \alpha_4 + \beta_4 NI_{it} + \gamma_4 DT_{it} + \eta_{it} \quad (4)$$

Where: $NIDT_{it}$ is the earnings before deferred tax for the period, measured by the net income after adding (subtracting) the deferred tax expense (income); NI_{it} is the earnings for the period, measured by the net income; OCF_{it} is the cash flow for the period, measured by the net operating cash flows; DT_{it} is the deferred tax for the period, measured by the deferred tax expense (income); $\alpha_1, \alpha_2, \alpha_3, \alpha_4$ are constants; $\beta_1, \beta_2, \beta_3, \beta_4$ are parameters of earnings that measure the persistence of earnings before (β_1) and after (β_2) deferred tax and the predictive ability of earnings before (β_1) and after (β_2) the deferred tax; γ_2, γ_4 are the regression coefficients of the deferred tax expense (income); $\varepsilon_{it}, \zeta_{it}, \delta_{it}, \eta_{it}$ are the errors terms.

Data collection

The study was carried out using data from 40 Algerian companies during the period 2013-2019, where 280 firm-year observations have been obtained. The selection of companies was based on the accessibility to their financial information due to the secrecy and caution characterizing corporate governance in Algerian companies. The required data were collected directly from the annual reports of companies.

Variables measurement

The variables have been measured directly using the amounts related to them collected from the financial statements (profit or loss of the period, net operating cash flows, deferred tax expense or income). The obtained amounts have been weighted using the total assets to isolate the size dispersion effect.

Results and discussion

Descriptive statistic

The descriptive statistics of data show that the share of each variable does not exceed 6% of total assets; it reaches 5.7%, on average, for earnings with deferred tax (NI), and it is the highest. The share of earnings without deferred tax ($NIBT$) of total assets reaches 5.4%, on average, for operating cash flows (OCF), it reaches 3.7%, on average; and finally, it reaches 0.3%, on average, for deferred tax (DT), and it is the lowest. According to the minimum, all variables contain negative values besides positive

values. Finally, the standard deviation indicates that the variables are homogenous in terms of dispersion.

Table 1: Descriptive statistic of data for 40 companies during 2013-2019

	NIBT	NI	DT	OCF
Mean	0.054	0.057	0.003	0.037
Median	0.079	0.084	0.043	0.089
Minimum	-0.412	-0.412	-0.971	-0.540
Maximum	1.556	1.745	0.947	1.374
Standard Deviation	0.297	0.316	0.258	0.266
Observations	280	280	280	280

Correlation analysis

Table 2 summarizes the results of correlation that concern the associations presented in the study models. The probabilities indicate that all correlations are significant at 1%, while their levels are mixed. The relationships between current earnings and one-period-ahead earnings present very strong positive correlations, whether before ($NIDT_{it+1}$ with $NIDT_{it}$) or after deferred tax (NI_{it+1} with NI_{it}). Otherwise, the relationships between one-period-ahead cash flows (OCF_{it+1}) and current earnings present moderate positive correlations with current earnings, whether before ($NIDT_{it}$) or after deferred tax (NI_{it}). Concerning deferred taxes (DT_{it}), their relationships with all variables present very weak correlations.

Table 2: Correlation results

Correlation Probability	$NIDT_{it}$	NI_{it}	DT_{it}
$NIDT_{it+1}$	0.907	-	-
	0.000	-	-
NI_{it+1}	-	0.900	0.097
	-	0.000	0.000
OCF_{it+1}	0.488	0.480	0.050
	0.000	0.000	0.000
NI_{it}	-	-	0.086
	-	-	0.000

The effect of deferred taxes on earnings persistence

Measuring the impact of deferred taxes on earnings persistence requires estimating Model (1) and Model (2). The results summarized in Table 3 show that the two models are statistically significant at the 1% level, suggesting that earnings are persi-

stent, whether before deferred tax in Model (1) or after deferred tax in Model (2). Consequently, current earnings can predict one-period-ahead earnings since their explanatory power reached 81.8% before deferred tax and 81.5 after deferred tax. That result is consistent with the parameters of earnings, which are significant at the 1% level before ($NIBDT_{it}$) and after deferred tax (NI_{it}). The constants and the parameter of deferred tax (DT_{it}) are not statistically significant.

Table 3: Model (1) and Model (2) estimations results

Independent variables	Predicted	Coefficients	tstat.	Fstat.	Adj. R ²
Persistence before differed tax					
Model (1) - Dependent: $NIBDT_{it+1}$					
(Constant)	?	0.001	0.063	225.97**	0.818
$NIBDT_{it}$	+	0.661	15.03**		
Persistence after differed tax					
Model (2) - Dependent: NI_{it+1}					
(Constant)	?	0.002	0.134	110.88**	0.815
NI_{it}	+	0.607	9.949**		
DT_{it}	±	0.218	0.311		

** Significant at 1% level

Model (1) measures the earnings persistence before deferred tax, and Model (2) measures the earnings persistence after deferred tax. Comparing the results of the two models, we observe that the adoption of deferred tax in Algeria did not improve earnings persistence. The determination coefficient and the parameter of earnings have decreased only from 81.8% to 81.5% and from 0.661 to 0.607, respectively, even though these decreases must be neglected as they are very weak. Thereby, *Hypothesis I* is not valid, so deferred taxes do not affect the persistence of earnings in Algerian companies.

The effect of deferred taxes on earnings predictive ability

We measured the effect of deferred taxes on earnings predictive ability through estimating Model (3) and Model (4) and comparing their outcomes. The results in Table 4 indicate that both Model (3) and Model (4) are statistically significant at the 1% level; thus earnings have a predictive ability, which means that current earnings can predict one-period-ahead cash flows. However, the predictive ability of earnings is weak, whether before deferred tax in Model (3) or after deferred tax in Model (4), reaching 22.2% and 21.1%, respectively. Except for the regression coefficient of deferred tax, which is not statistically significant, the constants and the regression coefficients of earnings, whether before ($NIBDT_{it}$) or after (NI_{it}) deferred tax are statistically significant at the 1% level.

Table 4: Model (3) and Model (4) estimations results

Independent variables	Predicted	Coefficients	tstat.	Fstat.	Adj R ²
Predictive ability before differed tax					
Model (3) - Dependent: OCF_{it+1}					
(Constant)	?	0.049	4.459**	14.39**	0.222
$NIBDT_{it}$	+	0.252	3.793**		
Predictive ability after differed tax					
Model (4) - Dependent: OCF_{it+1}					
(Constant)	?	0.050	4.300**	7.30**	0.211
NI_{it}	+	0.253	3.788**		
DT_{it}	±	0.499	0.333		

** Significant at 1% level

When comparing the results of Model (3), which measures the predictive ability of earnings before deferred tax with the results of Model (4), which measures the predictive ability of earnings after deferred tax, we note that the impact of deferred tax on the predictive ability of earnings is very weak, as the determination coefficient has decreased only from 22.2% to 21.1% and the parameter of earnings has increased only from 0.252 to 0.253, so these changes can be neglected. Thereby, *Hypothesis2* is not valid since deferred tax does not affect the predictive ability of earnings in Algerian companies.

Discussion

The results of this study recorded a very weak negative impact of deferred tax on earnings persistence and a very weak negative impact of deferred tax on the predictive ability of earnings. Considering that those impacts are neglected, we concluded that deferred tax does not impact the earnings quality in Algerian companies. These findings are consistent with Foster and Ward (2007) and Dreher *et al.* (2017), who found that accounting information about deferred taxes did not enhance the accuracy of performance forecasts and can even worsen performance predictions.

The findings of this study differ from studies that indicated a negative effect of deferred tax on earnings persistence (Hanlon, 2005; Blaylock *et al.*, 2012; Adiati *et al.*, 2018; Hardiningsih *et al.*, 2019), and those that demonstrated the importance of book-tax differences in determining the persistence of earnings and accruals (Dridi and Adel, 2016). They also differ from Amir *et al.* (1997), who stated that separating deferred taxes into components provides value relevant information, and Martinez *et al.* (2015), who suggested that temporary large positive book-tax differences provide useful incremental information about the magnitude of accruals, and Hong and Shim (2019), who found that tax categories have incremental information about the probability of loss reversal under Korean-GAAP 16.

Conclusion

Earnings quality is a required attribute to achieve the objective of financial reporting for general purpose, as expected by the IASB's conceptual framework for financial reporting. On the other hand, deferred tax is a technique adopted by accounting bodies to support the economic orientation of financial statements over their legal form, thus improving earnings quality and the financial reporting quality as a whole. Starting from that supposition, the present paper asks a question about the impact of deferred tax on earnings quality expressed by their persistence and predictive ability. The study used the model of Sloan (1996) and employed 280 observations that concern 40 Algerian companies during the period 2013-2019. According to the results:

- The amounts of deferred tax are still relatively unimportant in the financial statements, suggesting that the adoption of accounting for deferred tax by Algerian companies is still limited.
- Earnings of Algerian companies present a high level of persistence, whether with or without deferred tax.
- Earnings of Algerian companies present a weak level of predictive ability, whether with or without deferred tax.
- Deferred tax has a neglected negative effect on earnings persistence in Algerian companies.
- Deferred tax has a neglected negative effect on earnings predictive ability in Algerian companies.
- Deferred tax has not any effect on the earnings quality of Algerian companies.

These results can be assigned to the specificities of the Algerian business environment and the novelty of accounting reforms, besides the limited application of deferred tax by Algerian companies. These results have practical implications for different parties interested in the financial statements, especially accounting regulators in Algeria who required introducing amendments on accounting for the deferred tax to simplify it and enable managers to apply it with low cost and timeliness, thus improving earnings quality. Auditors also are required to impose the application of accounting for deferred tax by managers consistent with the regulation. Additionally, future studies must extend the sample size and use other indicators of earnings quality and financial reporting quality as a whole.

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