

ISSN 0974-763X

SOUTH ASIAN JOURNAL OF MANAGEMENT RESEARCH (SAJMR)

Volume 14, No. 2

March, 2024

SPECIAL ISSUE



**Chhatrapati Shahu Institute of Business
Education & Research (CSIBER)**

(An Autonomous Institute)

University Road, Kolhapur-416004, Maharashtra State, India.

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Website : www.siberindia.edu.in

SOUTH ASIAN JOURNAL OF MANGEMENT RESEARCH (SAJMR)

ISSN 0974-763X

(An International Peer Reviewed Research Journal)



Published by

CSIBER Press, Central Library Building

Chhatrapati Shahu Institute of Business Education & Research (CSIBER)

University Road, Kolhapur - 416 004, Maharashtra, India

Phone : 0231-2535706, 2535707. Fax : 0231-2535708

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South Asian Journal of Management Research (SAJMR)

Volume 14, No. 2, March 2024

Editor: Dr. Pooja M. Patil

Publisher

CSIBER Press

Central Library Building

Chhatrapati Shahu Institute of
Business Education & Research (CSIBER)
University Road, Kolhapur – 416004, Maharashtra, India.
Phone: 91-231-2535706/07, Fax: 91-231-2535708,
Website: www.siberindia.edu.in
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ISSN 0974-763X

Price: INR 1,200/-

Editor: Dr. Pooja M. Patil

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Central Library Building

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Business Education & Research (CSIBER)
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Editorial Note

South Asian Journal of Management Research (SAJMR), is a scholarly journal that publishes scientific research on the theory and practice of management. All management, computer science, environmental science related issues relating to strategy, entrepreneurship, innovation, technology, and organizations are covered by the journal, along with all business-related functional areas like accounting, finance, information systems, marketing, and operations. The research presented in these articles contributes to our understanding of critical issues and offers valuable insights for policymakers, practitioners, and researchers. Authors are invited to publish novel, original, empirical, and high quality research work pertaining to the recent developments & practices in all areas and disciplines.

Cross-functional, multidisciplinary research that reflects the diversity of the management science professions is also encouraged, the articles are generally based on the core disciplines of computer science, economics, environmental science, mathematics, psychology, sociology, and statistics. The journal's focus includes managerial issues in a variety of organizational contexts, including for profit and nonprofit businesses, organizations from the public and private sectors, and formal and informal networks of people. Theoretical, experimental (in the field or the lab), and empirical contributions are all welcome. The journal will continue to disseminate knowledge and publish high-quality research so that we may all benefit from it.

Dr. Pooja M. Patil
Editor

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The Value Relevance of Integrated Reporting and Deferred Taxation in UK-listed Companies

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Abstract

Over time, research has primarily focused on analysing the value relevance of Integrated Thinking and Reporting (IR) and deferred taxation (DT) in isolation, overlooking their interconnectedness. This study fills this gap by examining their indirect relationship using a sample of 399 publicly listed UK companies from 2013 to 2022, totalling 3,865 firm observations. Employing panel data regression models with industry and year fixed effects, supplemented by Seemingly Unrelated Regression models for robustness testing, the paper's findings reveal a significant positive association between IR and firm value. Additionally, the analysis demonstrates a negative coefficient between DT expense and DT liability with firm value, while the market perceives deferred tax assets positively. Furthermore, the paper's results suggest no moderating effect of IR on net deferred tax expenses. This research contributes new insights to the existing literature on IR and enhances understanding of the market implications of DT and IR interactions.

Keywords: Deferred tax expense, Net deferred tax liabilities, Integrated Reporting Framework, Value Relevance, Deferred tax assets

Introduction

Integrated reporting, or <IR>, is a relatively new concept in the context of accounting and financial reporting. In the past 10 years, IIRC (2013) has developed the IR global Framework, which aims to create "a world in which integrated thinking is embedded within the mainstream business practice." Because of its potential to enhance financial reporting quality over the short, medium, and long term as well as provide a comprehensive understanding of a company's performance and its effects on the environment and society, IR is a promising strategy that has garnered a lot of attention recently (Vitolla et al., 2019).

To provide a more complete view of a company's operations, IR combines financial and non-financial data, including disclosures on many capitals, into a single report (Soriya & Rastogi, 2021). These capitals include financial, intellectual, social, and natural capital amongst others, according to the IIRC (2013) and Velte (2022). As a result, IR has grown to be an essential tool used by companies to educate stakeholders about their social responsibility and environmentally friendly business practices (Dey, 2020).

Businesses are increasingly adopting integrated reporting, recognising its benefits in promoting social responsibility and sustainability. As a result, companies are beginning to acknowledge the potential advantages of integrated reporting in terms of profitability and firm value. Research by Tlili et al. (2019) highlights the significant impact that integrated reporting and sustainable reporting can have on corporate value. Furthermore, empirical studies such as that by Sun et al. (2022) demonstrate a positive correlation between higher business value and greater quality of multiple capital disclosure (MCD). With the growing importance of multi-capital disclosures, it is anticipated that the adoption of integrated reporting and sustainability practices will continue to increase as firms aim to enhance their overall performance and societal impact.

There is considerable debate about whether MCD/IR increases a firm's value relevance. Sun et al. (2022) and Tlili et al. (2019) suggest that MCD/IR has a positive impact on corporate value, however Landau et al. (2020) and Cortesi & Vena (2019) find no significant impact or even a negative one. The conflicting results of this research suggest that the relationship between MCD/IR and corporate value relevance is intricate and contingent upon several factors, such as the country or industry in which the company operates and the quality of the reports. More research is needed to better understand the conditions in which MCD/IR could raise the importance of firm value and look into potential moderating variables.

Deferred taxes also hold significant importance in financial reporting, as they bridge the gap between taxable income and accounting requirements. This aspect is often leveraged to provide informational value,

although it warrants additional research (Flagmeier, 2022). "Deferred taxation" refers to temporary variances between tax and accounting values that result in postponed tax payments. As highlighted by Soliman and Ali (2020), a company essentially acknowledges the variance between taxes paid and those still owed. Studies by Soliman & Ali (2020) and Görlitz & Dobler (2021) have demonstrated the value relevance of deferred taxation items. However, their impact on the relationship between integrated reporting (IR) and corporate value remains unclear. Further exploration is needed to understand how deferred taxes moderate the relationship between multiple capital disclosure (MCD)/IR and business value fully. While existing research suggests the value significance of deferred taxation, a deeper understanding is essential due to its complex implications on a company's financial performance.

The study aims to examine the relationship between deferred taxes and business value, the correlation between IR quality score and firm value, and the moderating impact of IR on the value relevance of deferred taxes. As previously mentioned, the literature that is currently available has looked at the relationship between DT and Market Value (Soliman & Ali, 2020) or the value relevance of integrated reporting (Baboukardos & Rimmel, 2016; Haleem et al., 2020). This will fill the research gap in the literature about the relationships between deferred taxes, IR, and firm value.

Literature Review and Hypotheses Development

IR: A short Literature review

The adoption of integrated reporting (IR) by businesses has attracted considerable attention in the accounting literature, as it is seen as offering a more comprehensive depiction of a company's activities and value creation. Integrated reporting aligns with the concept of integrated thinking, which has been emphasized by the International Integrated Reporting Council (IIRC) since 2013. The importance of integrated thinking was further emphasised in 2021, with modifications highlighting the significance of managing interactions with stakeholders and the environment, as well as overcoming the difficulties of operating within complex ecosystems (IIRC, 2021).

Internal benefits, external benefits, and a decrease in regulatory risks are the three primary advantages of IR (Dumay, 2016; Vitolla et al., 2019). Internal benefits manifest with better judgements about the distribution of resources yield competitive advantages (Vitolla et al., 2019). External benefits arise when meeting the demands of investors who want non-financial information resulting in not only external but also informational benefits (Vitolla et al., 2019). A decrease in regulatory risk occurs when firms are being equipped early in the event that regulators need further information which also helps to ease uncertainties and jeopardies (Dumay et al., 2016). The value relevance of IR is one of the least explored topics, according to Soriya and Rastogi (2022), which supports the findings of other authors' systematic reviews (Dumay et al., 2016; Vitolla et al., 2019) while the theoretical elements of IR are the most studied field of IR. Therefore, the shareholders, possible investors, institutions, and other capital market stakeholders may all profit from the research of value relevance.

Since the IIRC (2013; 2021) adopted and restated the multi-capital disclosures for IR, several researchers have examined the effect of these disclosures on a firm's market valuation; however, in contrast, very few have concentrated on the effect of IR on the capital market. From these, several studies (Haleem et al., 2020; Zhou et al., 2017) discovered evidence of a positive correlation between IR and corporate valuation. The research population, the number of businesses, and the nations under investigation were all different in the studies.

Numerous studies emphasised that South Africa was the first nation to mandate the use of IR (Atkins & Maroun, 2015; Corvino et al., 2020). These studies created an IR score and went further into the disclosures mandated by Integrated reporting capitals. When IR became a requirement in South Africa, several academics compared the two time periods and discovered that company value (Zhou et al., 2017) or earnings valuation had increased in value (Baboukardos & Rimmel, 2016). In a mandated context, integrated reporting has essentially been warmly welcomed.

Integrated reporting and market value have been found to positively correlate in several research papers, albeit in various contexts. In their analysis of Chinese A-share companies, Sun et al. (2022) find that while the quality of material capital disclosure may boost profitability, higher disclosure quality of multiple capitals in IR leads to larger firm value. Dey (2020) looks at Bangladeshi banking businesses and discovers that IR practices have a major beneficial influence on company value. The implementation of IR has a

favourable and considerable influence on the value relevance of other comprehensive income, according to Tlili et al. (2019) research of South African enterprises. According to an analysis of bank-integrated reports by Haleem et al. (2020), integrated reporting significantly affects an organization's value relevance. Market value and earnings valuation have some favourable correlations, according to Baboukardos & Rimmel (2016). Additionally, several studies show that firms with high-quality investor relations have a better market valuation than companies that publish with a lower IR quality score (Barth et al., 2017; Zhou et al., 2017).

Nevertheless, other voluntary contexts, meanwhile, have not received as much research attention. One example of such voluntary settings on the impact of certain elements, such as assurance in one of the biggest European stock exchanges, and the value significance of integrated reporting was given by Landau et al. (2020). The results illustrated the theory that IR has a negative influence on market value based on the premise of the cost concerned school. However, as it counteracted the negative impact, the study showed that the reports' quality mattered for market value. Therefore, it is still uncertain if IR is valuable to the market of voluntary adopters. According to Cortesi and Vena (2019), although IR has no beneficial effect on the value relevance of book value, it does increase corporate disclosure, lessen information asymmetries, and improve the quality of reported profits per share. According to Fernando et al. (2018), the adoption of integrated reporting has no impact on the applicability of accounting data. Abhayawansa et al. (2018) discovered that since the reports lacked the necessary information in a format that was desired or with sufficient detail, IR was not helpful for firm evaluation. Interviews with fund managers and analysts indicated a poor value for integrated reporting, even with institutional backing, according to Slack and Tsalavoutas (2018). Even if Flower (2020) is somewhat critical of integrated reporting, investors are aware that the integration of non-financial reporting has some value. Thus, based on the summary of the findings from the literature, it is expected that:

H1: The market value of firms is positively associated with integrated thinking and reporting score.

Deferred taxation: A short literature

Deferred taxes have long been a subject of contention and scrutiny within financial accounting, owing to their role in reconciling differences between taxable income and accounting requirements. Over the past few decades, numerous studies have delved into the value relevance of deferred taxes, aiming to understand their informational significance for financial statement users and their potential manipulation by firms. The investigation into the variations in book taxes and their potential implications, whether temporary or permanent, has attracted scholarly attention due to its complexity and relevance in understanding tax avoidance strategies (MacCarthy, 2021; Machdar, 2022). Despite existing research shedding light on this area, there remains a need for further investigation to ascertain the market's interest in deferred tax information of this nature. This literature review synthesizes key findings from influential studies on deferred taxes, focusing on their value relevance and implications for accounting practice and regulation.

Amir et al. (2001) explored the value relevance of deferred taxes in US GAAP, finding that deferred taxes were indeed value-relevant due to their deferral of tax payments. Their study highlighted the importance of categorization in improving the informational content of deferred taxes. Chang et al. (2009) investigated the value relevance of deferred tax accruals under the income statement method, finding positive associations between recognized deferred tax assets and firm value. Their study highlights sector-specific implications and signals that deferred tax liabilities reflect future tax payments, particularly for loss-making companies. Wong et al. (2011) offered conceptual solutions for enhancing deferred tax value relevance in New Zealand, after analysing the measurement option between comprehensive and partial allocation. They proposed partial allocation and discounted measurement as methods to improve relevance and understandability, and conclude that deferred tax liability is relevant for equity valuation. Hanlon et al. (2014) compared the value relevance of deferred tax elements under the balance sheet method with the taxes payable method. While they found limited additional value relevance for deferred tax balances under the balance sheet method, they emphasized the deferred tax on revaluation of assets are valued by investors as real liabilities.

Mear et al. (2020) examined the incremental value relevance of balance sheet deferred tax accounting, particularly focusing on the choice between balance sheet method rather than the tax payable method. Their results supported the relevance of footnotes on deferred tax to be higher than the amounts recognised per the balance sheet method. Guia & Dantas (2020) investigated the market value impact of deferred tax assets in the Brazilian banking industry. Their findings revealed a negative relationship between DTAs and market value, signalling investor concerns about the quality of equity and profit in the context of asymmetries

between taxable and corporate earnings. Görlitz and Dobler (2021) conducted a systematic review of empirical evidence on deferred taxes' value relevance and their role in earnings management in the US. Their findings suggest that while there is substantial evidence supporting the value relevance of various deferred tax items, there is limited evidence of firms using deferred taxes to manage their earnings. This emphasises the importance of understanding the dynamic relationship between deferred taxes and firm value. Using the Jones & Miller Model, Soliman and Ali (2020) determine the value significance of deferred tax in Egyptian listed enterprises. According to Sutopo et al. (2021), a big negative deferred tax paired with a large negative accrual has no effect on the link between profits and company value, whereas a large positive deferred tax combined with a large positive accrual weakens it. After analysing the German accounting system, Flagmeier (2022) comes to the conclusion that aggregate deferred taxes are significant to value. As Soliman & Ali (2020) mentions that deferred taxes are a significant component of discretionary accruals and helps to smooth profits and losses for aggravated earnings management, it is expected that:

H2: The market value of listed firms would be negatively associated with deferred tax expense and deferred tax income.

H3: The market value of listed firms would be negatively associated with deferred tax assets and deferred tax liabilities.

Given the benefits of the Integrated Thinking and Reporting process from the IIRC, especially based on the value creation activities mentioned in the IIRC (2021), as well as value preservation and disclosure on value erosion as well, it is expected that the Integrated Reporting system would moderate the value relevance of deferred taxes. Thus, the paper expects that:

H4: The market is of the opinion that there is a moderating effect of IR on Deferred Taxes.

Methodology

To generate an appropriate model, the paper modifies the use of the Ohlson (1995) model which had been adopted by Landau et al. (2020). $MV_{j,t}$ refers to the market value of a firm j at time t . The coefficients (α) of the independent variables represent their contribution to the variation in $MV_{j,t}$. The fixed effects register for endogeneity. The error term (ε) represents the unobserved factors that affect $MV_{j,t}$. The model estimates the values of α_0 , α_1 , and α_2 that best fit the data. As per Tliti et al. (2019), negative book values have been deleted from this analysis. This method has been extensively used in previous literature (Roychowdhury & Watts, 2007). For NI, the signed log method was utilised in this study to allow for the direction of movement of the variable. This method is mostly used for financial statement data, especially when there is much possibility of the variable being negative (Siimon & Lukason, 2021). All values are logged due to differences in the sizes of the listed companies across the UK (Cooke et al., 2009). The following equation helps to solve the first hypothesis:

$$MV_{j,t} = \alpha_0 + \alpha_1 BV_{j,t} + \alpha_2 NI_{j,t} + \alpha_3 IR_{j,t} + Industry\ FE + Year\ FE + \varepsilon$$

[1]

Where:

$MV_{j,t}$ is the natural logarithm of market value

$BV_{j,t}$ is the natural logarithm of book value of equity

$NI_{j,t}$ is the natural logarithm of net income (profitability) for the year

$IR_{j,t}$ is the Integrated Reporting Score proxy

IndustryFE is the industry fixed effects

YearFE is the year fixed effects

α_0 is the intercept

α_1 is the coefficient for BV

α_2 is the coefficient for NI

α_3 is the coefficient for IR

ε is the error term

The paper uses a similar methodology for the Ohlson model as Landau et al. (2020). The IR framework score is an objective rating provided by Refinitiv Eikon (Asset 4 successor) software based on their in-house assessment. Therefore, the integrated strategy in MD&A score as presented by the database can be

used as a proxy for integrated thinking and reporting quality scores (Dimes, 2023). Financial and non-financial data, encompassing profits, book value of equity, and net deferred taxes, were aggregated from the Refinitiv Eikon database. This extensive repository houses data from numerous companies and employs firm-reported information to compute scores reflecting a firm's achievement, stakeholder engagement, and overall effectiveness (Thomson Reuters, 2023).

To account for the subsequent hypotheses, equation 1 will be modified to include components of deferred taxes. In Equation 2, the paper follows Laux (2013), Lopez et al. (2020) and Flagmeier (2022) in segregating the deferred tax items into positives and negatives to consider the effects of each sub-item as combining both could lead to a loss of valuable information about its impact. Furthermore, to examine hypothesis 3, the paper adopts a moderating interaction effect methodology. Sutopo et al. (2021) employed moderating effects which made use of the interaction of the two independent variables. This paper adopts the latter methodology to examine the moderating effects of the Integrated Thinking and Reporting score on the value relevance of deferred taxation items. This methodology is not new to research as it has been employed in several other studies (Obeng et al., 2020; Rahman et al., 2020).

The updated model is to include deferred taxation and moderating effects as per below:

$$MV_{i,t} = \alpha_0 + \alpha_1 BV_{j,t} + \alpha_2 NI_{j,t} + \alpha_3 IR_{j,t} + \alpha_4 DTEA_{j,t} + \alpha_5 DTIA_{j,t} + \alpha_6 NDTA_{j,t} + \alpha_7 NDTL_{j,t} + IRxNDTEA + IRxNDTAL + FE + \varepsilon$$

[2]

where:

DTEA_{j,t}: the deferred tax expense deflated by total assets

DTIA_{j,t}: the negative deferred tax expense (deferred tax income) deflated by total assets

NDTA_{j,t}: the net deferred tax asset deflated by total assets

NDTL_{j,t}: the net deferred tax liability deflated by total assets

IRxNDTE: interaction term to determine moderating effect on net deferred tax expense deflated by total assets

IRxNDTAL: interaction term to determine moderating effect on net deferred tax asset or liability deflated by total assets

And the other variables as explained above

Onali et al. (2017) and Baltagi et al. (2003) advocated for the use of the Hausman test before choosing the regression model. Random fixed effects panel data regression was rejected after the Hausmann test; therefore, the fixed effects model is adopted. To improve the above results, the Seemingly Unrelated Regression Model will be adopted. The latter will also serve as a robustness test, to dissipate any concerns about the independent variables potentially unrelated to the dependent variable.

Results

The table below presents the descriptive statistics of the dependent as well as the independent variables. The data has been gathered from Refinitiv Eikon (successor of Asset4) from a sample of UK listed companies. UK companies were chosen for this study owing to their documented rigorous regulatory frameworks, which implement extensive disclosure mandates and guarantee the accessibility of both high-quality financial and non-financial data. Moreover, the selection of UK companies was influenced by the prominence of the country's stock exchange, making it an ideal setting for comprehensive analysis. The study focused on public companies over an ten-year period from 2013 to 2022. After excluding less than 5 firm-year observations, the number of firm observations is 3,865. This is in line with Tlili et al. (2019) who used a minimum of 6 years for their study. The average firm observations for this study for the 11 years for each firm was 9.7 observations per firm, and the number of firms studied amounted to 399 companies.

The descriptive statistics of the sample include market value with an average of EUR 4.32 billion market capitalisation, with an average book value of equity around 1.85 billion. The average profit was around the 200 million. The IR score had a mean of 34.45 and the net deferred tax expense (average of positive and negative) was 4 million and if calculated absolutely without negative sign, then it was around 18 million and the net deferred tax liabilities was 157 million before even considering its absolute amount. Thus, since the amounts of deferred taxes are significant, it has the possibility to influence the profitability and therefore net assets. After the signed natural logarithmic or deflation by total assets has been carried out, the independent variables have been assessed using the Pearson Correlation test as presented in Table 1.

Table 1: Pairwise Pearson correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) BV _{j,t}	1.000								
(2) NI _{j,t}	0.153	1.000							
(3) IR _{j,t}	0.479	0.065	1.000						
(4) DTEA _{j,t}	0.040	0.154	0.006	1.000					
(5) DTIA _{j,t}	-0.033	0.040	0.021	0.294	1.000				
(6) DTAA _{j,t}	-0.069	0.030	0.014	-0.019	0.069	1.000			
(7) DTLA _{j,t}	0.073	-0.021	0.056	-0.112	0.266	-0.017	1.000		
(8) IRxNDTEA _{j,t}	-0.005	0.147	-0.056	0.494	0.516	0.011	0.115	1.000	
(9) IRxNDTLA _{j,t}	-0.252	-0.046	-0.457	0.029	-0.226	0.053	-0.662	-0.123	1.000

Source: Author's Research

As expected, the Pearson correlation between the book value of equity and net income is positive. The larger the company's capital base, it is expected that the listed company is profitable. This is in line with several studies and the profitability and growth concepts (Landau et al., 2020). The highest correlation coefficient was -0.66 between deferred tax liabilities and the moderating effect involving deferred tax liabilities. However this is not a cause of concern since multicollinearity is concerning when the coefficient becomes greater than 0.8 or 0.9 (Vitolla et al., 2020). Another statistical test which is of use is the variance inflation factor (VIF).

Table 2: Variance Inflation Factors (VIF)

Variable	VIF	1/VIF
IRxNDTLA _{j,t}	2.66	0.38
DTLA _{j,t}	2.18	0.46
IR _{j,t}	1.80	0.56
IRxNDTEA _{j,t}	1.70	0.59
DTIA _{j,t}	1.49	0.67
DTEA _{j,t}	1.41	0.71
BV _{itj,t}	1.35	0.74
NI _{itj,t}	1.06	0.94
DTAA _{j,t}	1.02	0.98
Mean VIF	1.63	

Source: Author's Research

According to commonly used rules of thumb, there was no significant evidence of multicollinearity among the variables since the variance inflation factors (VIF) did not exceed 10 which suggest that the independent variables in the regression model are not highly correlated with each other, which strengthens the reliability of the estimated coefficients and their interpretation (Anderson & Gupta, 2009; Landau et al., 2020). It is to be noted that adding individual interaction terms for each deferred tax variable increased the VIF due to repetitions. However, since the net deferred tax expense interaction and the net deferred tax liabilities interaction terms theoretically represent both elements, thus it is not necessary to include individual interaction terms. The next step after testing for multicollinearity is the regressions of the independent variables to the dependent variable. Table 3 presents the results of such regressions based on two robust regression techniques, both of which can be applicable to the research objectives and hypotheses.

Table 3: Regression Results output

	Fixed Effects Regression	Robustness Test Seemingly Unrelated Regressions
	MV _{j,t}	MV _{j,t}
BV _{j,t}	0.836*** (86.47)	0.796*** (82.51)
NI _{j,t}	0.0142*** (12.53)	0.0164*** (13.82)
IR _{j,t}	0.00513*** (8.08)	0.00261*** (4.08)
DTEA _{j,t}	-21.66*** (-3.74)	-38.05*** (-6.23)
DTIA _{j,t}	(1.81) (-0.53)	(7.07) (-1.84)
DTAA _{j,t}	30.94*** (3.92)	38.00*** (4.44)
DTLA _{j,t}	-4.670*** (-6.64)	-4.487*** (-6.06)
IRxNDTEA _{j,t}	0.07 (1.63)	0.08 (1.76)
IRxNDTLA _{j,t}	-0.0447*** (-3.60)	-0.0412** (-3.01)
_cons	3.707*** (20.03)	4.537*** (24.67)
N	3,865.00	3,865.00
F	1,386.60	-
p-value	0.00	0.00
Akaike Information Criterion	9,505.20	10,102.30
R ²	0.77	0.73
R ² _{adj}	0.77	-
Industry Fixed Effects	Yes	-
Year Fixed Effects	Yes	-

Source: Author's Research

The book value of equity based on the Fixed effects model and the seemingly unrelated regression model have significant positive coefficients of around 0.8, which means that size or net assets are positively viewed by the market. Moreover, profitability registers positive coefficients of approximately 0.014 or 0.016, indicating a positive inclination towards profitability in investors' decision-making processes concerning businesses.

Hypothesis 1 is supported by the findings, as evidenced by the positive and statistically significant coefficient associated with the Integrated Thinking and Reporting score. The results indicate that an increase in the Integrated Thinking and Reporting score leads to a corresponding rise in market value, with the coefficient estimated to be 0.005 or 0.0026.

Regarding hypothesis 2, the deferred tax expense is valued negatively by the market. Since the variable is deflated by total assets, the coefficient might seem large but it is to be seen comparatively with other aspects. The coefficient is -21.66 for deferred tax expense and is significant whereas for deferred tax income is not. The stock exchange does not assign a significant positive value to deferred tax income; rather, it tends to attribute a negative valuation to deferred tax expense.

Both net deferred tax assets and liabilities are viewed significantly by the market concerning hypothesis 3. The market negatively views deferred tax liabilities whereas investors view deferred tax assets much more positively than they negatively view deferred tax liabilities. Also, investors believe that integrated thinking and reporting tend to decrease the negative impact of net deferred tax liabilities. However, there is no observable moderating effect of integrated thinking and reporting on net deferred tax expenses as perceived by the market.

Discussion of the Results

The first hypothesis tests the adoption of an integrated reporting framework. The IR score ranged from 0 (not adopting the Integrated Thinking and Reporting concept since it is voluntary) to 99, which subjected each company to a uniform evaluation. Given that integrated reporting cannot be evaluated in isolation, the study also examined the value relevance of the book value of equity and net income as control variables. This approach acknowledges the interplay between integrated reporting and these traditional financial metrics, providing a comprehensive assessment of their combined impact on market valuation. Consequently, the findings indicate that Book Value (BV), Net Income (NI), and Integrated Reporting (IR) serve as relevant and significant indicators influencing the market value of a listed firm. This observation aligns with previous research, suggesting that investors place significance on Integrated thinking and reporting, resonating with the commitment to short-, medium-, and long-term value creation (Dey, 2020; Sun et al., 2022).

The second hypothesis tests the value relevance of deferred tax expenses and deferred tax income. From the results, the market finds informational values mostly from deferred tax expenses only. The market is not so much concerned with the effects when there is deferred tax income. This shows that investors are mostly interested in the short-term value erosion process as presented in the update of the IR framework in 2021 (IIRC, 2021). The market behaviour could also be explained through the signalling theory whereby relevant information has the ability to decrease information asymmetry and thus the market is aware of the deferred tax expenses increases could mean that there would be scrutiny of other parts of deferred tax components (Smith & Pennathur, 2017).

The third hypothesis tests for the value relevance of deferred tax assets and liabilities. From the results, the market values significantly deferred tax assets and deferred tax liabilities. The stock exchange associates deferred tax assets with a positive image of the company, perhaps relating to the future earning potential from the definition of an asset. This result is consistent with Chang et al. (2009) but contrary to Guia and Dantas (2020). Due to the difference in the coefficients, investors may also be less concerned with net deferred tax liabilities but more interested in net deferred tax assets due to cash flow implications and future tax planning opportunities (Flagmeier, 2022; Hamilton, 2018).

The moderating effect of IR on net deferred tax expenses is not present. This suggests that from the perspective of the market, IR does not, in the short term, help with decreasing deferred tax expenses. This is due to a planning from management which could range from medium to long term. Thus, it would be more appropriate if IR were significant in deferred tax assets or liabilities moderation. Indeed, there was a significant effect of IR on net deferred tax liabilities from the point of view of the market, that investor believe in the integrated thinking and reporting process to mitigate risk of manipulation of deferred taxes. These findings align partly with the previous research by Sutopo et al. (2021) on the moderating effects of large deferred tax assets. In line with the recommended prudential approach by Gelman & Stern (2006), the paper interprets these results cautiously, considering the potential implications for the value relevance of the integrated reporting framework score interaction with the deferred tax items. As such, only integrated reporting score moderates how the market values net deferred tax liabilities which are one important component of long-term book-tax differences. This is in consistent with the benefits of integrated reporting

pressing management to think about the creation of long-term value of the business, in which short-term deferred tax expenses may not have a major role.

Conclusion

The paper investigates the value relevance of integrated reporting in voluntary settings in the UK. This study is important in multifaceted ways. It, subsequently, addresses two important aspects that have received limited attention in the literature. Firstly, the paper investigates the value relevance impact of Integrated Thinking and Reporting. Second, the paper explores the value relevance of the distinct components of deferred taxes. Third, the paper assesses the potential moderating effects of the integrated reporting score on the value relevance of deferred taxation items. To the best of the author's knowledge, these relationships have not been studied before.

This research utilises a sample of UK-listed companies, covering the period from 2013 to 2022, and includes financial data from 399 listed companies and 3,865 firm-year observations. To answer the research hypotheses, the paper employs a literature-driven analytical approach, utilising a panel data regression model with fixed effects to estimate the value relevance coefficients of deferred taxation and the integrated reporting framework score.

The results from the panel data regression model with fixed effects and the seemingly unrelated regression reveal a significant positive relationship between the integrated reporting framework score and firm value. Additionally, the analysis indicates a negative coefficient for deferred taxation expense and deferred tax liabilities, indicating its detrimental impact on firm value. Investors may view high deferred tax expenses in the statement of profit and loss adversely due to its ability to decrease profit and the deferred tax liability as loss of future cash flows. In addition, there is a positive value relevance of deferred tax assets, as a way for investors to signal their appreciation for future cash inflows. Furthermore, the decomposition of the panel regression model suggests no moderating interaction effect of IR on the value relevance of deferred tax expenses. However, investors view integrated thinking and reporting as moderating the effect of the negative value relevance of net deferred tax liabilities in the long run.

This study holds significant implications for multiple stakeholders. Policymakers and standard-setters can derive insights into the value relevance of integrated reporting within voluntary frameworks, informing their decisions regarding its implementation. Practitioners are alerted to consider the impact of deferred taxation on firm value and the significance of integrated reporting. Additionally, avenues for further exploration into contextual factors' moderating effects on the integrated reporting-firm value relationship are opened.

Consequently, this paper contributes to the literature by scrutinising the value relevance of integrated reporting, with a focus on deferred taxation and the updated IR framework. These findings deepen the comprehension of the dynamic relationship among integrated reporting, deferred taxation, and firm value.

Although this paper contributes valuable insights into the value relevance of integrated reporting within voluntary frameworks in the UK, it is crucial to recognise certain limitations. The analysis is confined to a singular country, potentially constraining the applicability of the findings to other geographic areas. Subsequent research endeavours could enhance the scope by encompassing a more diverse array of countries and regions. This broader approach would facilitate a more comprehensive comprehension of the value relevance of integrated reporting across varied contexts.

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