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Article

Drivers of compliance between accounting standard and practice: Evidence from property, plant and equipment

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Abstract: This study examines the compliance between the accounting standard for Property, Plant and Equipment (PPE) and accountants' practices in terms of disclosure and measurement, in order to determine its levels and drivers. Based on the assumption that a higher level of compliance is associated with a higher quality of the accounting information system, compliance indices are proposed and econometric regressions are used to analyze the determinants of this accounting compliance for Portuguese firms. The empirical evidence shows that compliance is not high, and that it tends to be higher for disclosing rather than for measuring. Moreover, the results suggest that firm size has a positive impact on compliance, both for measurement and disclosure, consistent with larger firms being subject to greater scrutiny. Liquidity, on the other hand, tends to have a negative effect on compliance, as more liquid firms are less dependent on external financing. Furthermore, while leverage tends to have a positive effect on measurement compliance, profitability has no effect on accounting compliance. Therefore, this study adds evidence straight from the perceptions of practitioners who interpret and apply accounting standards and then influence the quality of financial reporting, providing valuable insights that have the potential to affect confidence in firms.

Keywords: accounting standards; accounting practice; indices of compliance; disclosure and measurement requirements; financial reporting quality

1. Introduction

To enhance financial reporting quality as well as to allow comparisons of financial statements across countries, the International Financial Reporting Standards (IFRS) have been developed by International Accounting Standard Board (IASB), thus contributing to a better interpretation of data and decision-making (Hellmann and Patel, 2021). IFRS are principles-based accounting standards that tend to increase the quality of reported earnings because they allow for the disclosure of the true and fair view of firms consistent with the evidence found by Agoglia et al. (2011). In the same vein, Cohen et al. (2013) argue that auditors are more likely to mitigate aggressive reporting under principles-based accounting standards rather than rules-based standards, which means that principles-based standards tend to produce higher earnings quality. In addition, Cerqueira and Pereira (2019) emphasize that accounting regulation is fundamental to balancing the trade-off between more informative financial statements and reducing the level of managers' opportunistic choices. The importance of adopting IFRS and its impact on the future quality of financial information is highlighted by Luty and Petkovic (2021).

Regarding the accounting treatment of PPE, the International Accounting Standard (IAS) 16 is fundamental for firms to prepare their financial statements, which is used worldwide. Furthermore, PPE is often the largest item in a firm's assets with implications for financial autonomy and guarantees to creditors, requiring management to make a correct assessment. This standard has evolved, namely by accommodating and addressing issues of inconsistency and different accounting treatment methods (Epizitone, 2021). Moreover, the regulation of the PPE accounting treatment contributes to mitigating the use of earnings management practices, then allowing for the provision of impartial information about activities that affect its intrinsic value (Ekholm and Troberg, 1998). Then, this research relies on the argument that higher compliance between accounting practice and accounting standards tends to increase the quality of accounting information systems. This is essential for several stakeholders, such as for shareholders to make efficient capital allocation (Givoly et al., 2010; Jeon and Oh, 2020). Consistently, Samson et al. (2024) argue that the accurate measurement of PPE is fundamental for financial reporting in Nigeria, because it affects its reliability and transparency.

This study examines the degree of compliance of accounting practice with the IAS 16 requirements by focusing on the Portuguese Accounting Standard for PPE, which prescribes an identical accounting treatment (Botelho et al., 2015; Lima, 2019). Therefore, a conformity index is proposed, by collecting data through a questionnaire from non-financial Portuguese firms. In addition, this index is split into measurement and disclosure components to analyze them separately. To further develop this research, the drivers of overall compliance and of each measurement and disclosure compliance are investigated, namely the firm's size, level of debt, type of auditor, profitability and level of liquidity. For example, Erdem et al. (2017) argue that there is a positive relationship between the level of disclosure of financial information and a firm's size. Whereas Francis et al. (2005) and Serqueira et al. (2024) mention that firms that require more external financing levels are likely to voluntarily disclose more financial information and exhibit higher quality.

This study's contributions are threefold: First, we calculate an index of compliance between accounting practice and accounting standards, specifically for PPE, providing practical evidence for Portuguese non-financial firms that has not yet been sufficiently explored in academic research; second, we split this compliance index into two components, measurement and disclosure, which allow us to determine which component exhibits a higher compliance; third, we provide evidence regarding the drivers for general compliance and for measurement and disclosure compliance.

This paper is divided into five sections. After the introduction, Section 2 presents the literature review on International Accounting Standards and earnings quality. Section 3 presents the empirical methodology used to conduct the empirical study, namely by defining the sample, models and variables used. Section 4 documents and discusses the empirical results obtained. Section 5 presents the conclusions of this research, as well as its contributions, limitations and suggestions for future research.

2. Literature review

2.1. International accounting harmonization

Legal systems combined with other political and economic differences have created a great diversity of accounting systems, resulting in difficulties in comparing financial reporting across countries (Haller and Wehrfritz, 2013; Nobes, 2006). European countries are the greatest example of different legal systems, such as English, German, French and Scandinavian, with diverse and country-specific accounting systems (Soderstrom and Sun, 2007). International accounting harmonization allows the gains of the global economy to be fully achieved, by facilitating international transactions, minimizing exchange costs, providing increasingly credible information to its users, standardizing information for global economic policymakers, improving information from financial markets and improving government accountability (Shil et al., 2009).

The IASB is an exclusively private sector body, with an independent board of experts that develop accounting standards that are accepted based on their quality (Camfferman and Stephen, 2018). This body prepares and discloses the International Financial Reporting Standards (IFRS)/IAS which allow users to examine and compare corporate financial information internationally. In 2008, the emergence of the financial crisis coincided with the announcement of the Security Exchange Commission's plans for the adoption of IFRS by the US. Meanwhile, countries such as Brazil, Canada and South Korea have completed the requirements for the mandatory use of IFRS. In the case of China, it maintained its policy of converging national standards with IFRS, while in Japan, the number of listed firms with voluntary reporting based on IFRS has been increasing (Camfferman and Stephen, 2018). However, EU members were the first countries to move forward with the harmonization of accounting standards (Soderstrom and Sun, 2007).

With the increase of global international business and financing decisions, it has become vital to define common financial reporting standards. The objective of financial statements is to provide transparent and useful information, in order to reduce complexity and transaction costs and increase comprehensibility, relevance, reliability, comparability and international investment (Erdem et al., 2017; Iatridis, 2010). In addition, IFRS assists investors to make informed financial decisions and make future predictions for firm financial performance (Iatridis, 2010). In fact, IFRS are a set of accounting standards, that were developed for a global market, as an important means of improving the comparability of financial statements between countries (Hellmann and Patel, 2021). In addition, it is also important to adopt IFRS because they allow for an increase in the quality of financial information (Luty and Petkovic, 2021).

In the case of IAS 16, its objective is to prescribe the accounting treatment of PPE, so that users of financial statements can identify information about the entity's investment and changes in that investment (Epizitone, 2021; Muthupandian, 2009). Investing in PPE is usually a sign of a business' growth, representing a major financial effort to obtain future economic benefits. Disclosing more information on PPE allows communication with stakeholders, promoting their confidence, which may be useful to obtain additional resources (Botelho et al., 2015). In addition, firms with less accounting information system quality have more inefficient investments, as they tend to engage in more overinvestment (Pereira et al., 2024). Therefore, this study focuses on the measurement and disclosure requirements related to PPE.

2.2. Earnings quality

Accounting theory can be formulated as a combination of concepts, definitions and propositions that present a systematic description of accounting phenomena, as well as the basis of the relationship between variables in the accounting structure, to be able to predict social and economic phenomena (Patty et al., 2021). Positive accounting theory is a more in-depth study of accounting theory because of the normative failure to explain practical events that occur in real terms and is based on the assumption that all individual actions are controlled by self-interest and that individuals act opportunely in order to improve their well-being (Patty et al., 2021). The first empirical studies of accounting choices investigated the impact of variables related to earnings-based incentive plans, debt and the political process affecting the firm (Watts and Zimmerman, 1978, 1986).

In fact, with the industrial revolution there was rapid growth in industries, making it necessary to delegate responsibilities to managers (Bendickson et al., 2016). Both managers and owners maximize their own utility, the former may not always act in the best interests of the latter (Jensen and Meckling, 1976). The agency theory states that all actions have real costs, so the corrections necessary to improve the quality of the agent and the actions of principals have costs (Mitnick, 2015). Another important aspect of agency theory is information asymmetry between managers and owners (Jensen and Meckling, 1976; Zogning, 2017). There are several controls and mechanisms that can be used to mitigate information asymmetries and risk information. These mechanisms allow for better supervision of management activity, which may reduce the opportunistic behavior of managers, such as degradation of financial reports quality (Bushman and Smith, 2001; Healy and Palepu, 2001; Hope and Thomas, 2008). Hence, the quality of the accounting system is determined by the ability to measure firm performance (Dechow et al., 2010). Poorly applying the accounting standards can have an impact on the quality of accounting information. Another factor that may affect the quality of accounting information is economic conditions. Prior literature collects evidence that economic cycles produce an impact on earnings management activities, in addition, it shows that this association depends on the intensity of the financial crisis (Cerqueira and Pereira, 2020; Trombetta and Imperatore, 2014). In the same vein, Kasztelnik (2020) shows that IFRS increases the usefulness of financial information by allowing revaluation that reflects changes in asset values. However, Arafat et al. (2024) find no evidence that IFRS and the use of fair value can mitigate the power of the CEO in relation to the other members of the Board of Directors. Nevertheless, their study emphasizes the importance of corporate accounting disclosure practices.

2.3. Research hypotheses

As accounting earnings affect decision-making, it is essential that they have high quality (Dechow et al., 2010). For that purpose, larger firms benefit from having better internal controls (El-Rabat et al., 2023, Kalbuana et al., 2021). The adoption of IFRS standards gives a positive signal about the quality of accounting and provides greater transparency in implementing IFRS (Luty et al., 2021). In a similar vein, firms

adopting IFRS, regardless of whether in a mandatory or voluntary manner, tend to exhibit greater quality disclosure than firms that use the local GAAP (Iatridis, 2010).

In terms of the determinants of IFRS adoption, firm size is found to influence adoption (Leuz and Verrecchia, 2000). Consistently, investigating the voluntary disclosure compliance factors of 133 publicly listed Swiss firms in accordance with IAS 16, Dumontier and Raffournier (1998) concluded that firm size has a positive effect on voluntary disclosure practices. Relying on the compliance level of firms in the Istanbul Stock Exchange 100 index in 2008 evidence was found that there is a positive relationship between the level of disclosure and firm size (Erdem et al., 2017). Therefore, large firms are expected to comply with the disclosure requirements set out in IAS 16. Given this evidence, we formulate hypothesis 1 as follows:

H1: The firm's size is positively associated with the compliance between accounting practice and the PPE accounting standard.

According to positive accounting theory, the debt hypothesis determines that firms with higher debt-equity ratios choose accounting procedures in order to transfer earnings from future periods to the current period (Kabir, 2011). This negatively influences the quality of financial information. Consistent with this argument, Khuong et al. (2022) state that firms with a high debt/asset ratio are more likely to have financing problems, leading to less earnings persistence. By contrast, debt was found to reduce earnings quality for a sample of small and medium-sized entities (Pereira et al., 2023). However, agency theory establishes that the reduction of uncertainty and asymmetry of information would smooth communication between managers and other interested parties that interact and in turn reduce debt costs. In this sense, earnings persistence is a desirable characteristic that allows a reduction in the cost of debt (Francis, 2004). On the other hand, firms that require external financing voluntarily disclose more information than a country's minimum requirements, thereby benefiting from lower capital costs (Francis, 2005). Consistently, firms following IFRS exhibit higher earnings quality and lower cost of debt (Lee et al., 2015). In the same vein, creditors prefer more conservative accounting information, given that it is considered to be of higher quality (Cerqueira e Pereira, 2020). However, in firms with a high risk of covenant violation, it is better to engage in earnings management to avoid such a violation (Dyreng et al., 2020). While earnings quality deteriorates with the increase of debt, when debt becomes at high levels, firms tend to enhance earnings quality in order to capture creditors confidence (Sequeira et al., 2024). Furthermore, these authors find that short-term debt tends to decrease earnings quality more than long-term debt. Following the trend that firms with more debt have advantages in increasing the quality of financial reporting, we formulate hypothesis 2 of this study:

H2: The level of indebtedness is positively related to the compliance between accounting practice and PPE accounting standard.

The type of auditor is related to a greater degree of disclosure and quality of the financial statements. The auditors' report adds value to financial information and provides a reasonable guarantee of the faithful representation of economic events (Street and Bryant, 2000). Consistent with this vein, investigating non-compliance with the IAS, auditor reputation has a significant positive association with the degree of compliance (Naser and Nuseibeh, 2003). However, these authors conclude that there is a significant extent of non-compliance with IAS disclosure requirements.

Examining the determinants of the information level disclosure for IAS 16, with a sample of industrial firms listed on the Istanbul Stock Exchange in 2012 and 2013 and by comparing the level of compliance and various business characteristics, the most significant disclosure factor is the auditor's reputation (Erdem et al., 2017). Other previous studies also concluded that the auditor's reputation determines a greater degree of compliance with the requirements of IAS 16 (Dumontier and Raffournier, 1998; Naser and Nuseibeh, 2003). In light of signaling theory, it is important to distinguish auditors by their reputation (Chow, 1982). According to these arguments, we posit the hypothesis 3 as follows:

H3: The reputation of the auditor is positively related to the level of compliance between accounting practice and PPE accounting standards.

Furthermore, firms with higher profitability have higher political costs resulting from high government control (Watts and Zimmerman, 1978). Signaling theory predicts that higher quality in financial information implies that firms choose accounting policies that reveal their superior quality. This, in turn, allows them to increase their value in the market. Therefore, more profitable firms are more willing to comply with disclosure in a better way (Erdem et al., 2017). By contrast, no significant effect of profitability on voluntary disclosure practices by Dumontier and Raffournier (1998). According to these arguments, we posit the hypothesis 4:

H4: Profitability is positively related to the degree of compliance between accounting practice and PPE accounting standard.

A firm's performance is observable, namely, by its ability to generate cash flows during the period plus the variation in the liquidity value of net assets (Dechow et al., 2010). The liquidity ratio was significant in terms of compliance with IAS disclosure requirements, which tends to reduce such compliance (Al-Akra et al., 2010). On the other hand, liquidity is found not to be significant in determining the level of compliance in terms of recognition and disclosure (Erdem et al., 2017). Based on these studies, we posit the hypothesis 5:

H5: The degree of liquidity is negatively associated with the level of compliance between accounting practice and PPE accounting standard.

3. Research methodology

3.1. Sample selection

This research is developed by combining a quantitative approach. It evolves to collect data from financial statements throughout the Iberian Balance Sheet Analysis System (SABI) database and the responses to a questionnaire regarding the application of accounting standards for PPE. The questionnaire allows us to distinguish compliance related to measurement but also to disclosure. The sample contains financial information for the years 2021 and 2022, for active Portuguese firms, which adopt the local accounting standard (SNC). This is due to the specific accounting standard for PPE being identical to the IAS 16 (Botelho et al., 2015; Lima, 2018), it allows us to increase the sample size. This choice is due to Portugal being a European Union Member implying that firms follow the same accounting regulation, thereby enhancing comparisons but where empirical studies about financial reporting are scarce. In addition, to include firms in the analysis, we require that the average number

of employees in those years be equal to or greater than 50 and their accounts must be audited, leading to a sample with 8159 entities. After filtering entities with an available email address, the sample was reduced to 7286 entities. The questionnaire was carried out online and sent to the accountants of firms selected during the period from 01 February 2023 to 30 June 2023.

We obtained 461 responses to the questionnaire, of which only 205 answered all questions. After analyzing all responses, 39 responses were excluded because it was not possible to identify the firms. Furthermore, given the accounting principle of consistency, which implies maintaining the same accounting practices from one financial year to another, the responses continue to be considered as long as the respective firms remain on the SABI platform in 2022. In this way, after receiving the 166 responses to the questionnaire for the year 2022, the total number of observations in the sample becomes 282.

3.2. Empirical model and variables definitions

To test the hypotheses considering compliance (Comp) as the dependent variable, we estimated an econometric model using OLS with five independent variables: size, debt, type of auditor, liquidity and profitability.

$$Comp_{i,t} = \beta_0 + \beta_1 Size_{i,t} + \beta_2 Debt_{i,t} + \beta_3 Audit_{i,t} + \beta_4 Liq_{i,t} + \beta_5 ROE_{i,t} + \varepsilon_{i,t} \quad (1)$$

where,

i, *t* represents firm *i* for period *t*

Size is the natural logarithm of total assets.

Debt is total liabilities scaled by equity.

Audit is a dummy variable which is set to 1 if firm is audited by a Big Four (Deloitte Touche Tohmatsu, PriceWaterhouseCoopers (PWC), Ernst & Young (EY) e KPMG) and 0 otherwise.

Liquidity is the current assets scaled by current liabilities.

ROE is the return on equity, which is given by net income scaled by equity.

$\varepsilon_{i,t}$, are the residuals of the regression estimations.

Regarding the dependent variable Comp is the ratio of compliance which is calculated according to the answers given in the questionnaire, regarding the fulfilment of the requirements set out in IAS 16. In a total of 19 requirements, for each answer converging with the standard heading, the value will be 1, otherwise it will be 0.

In addition, we split the questionnaire into two sections: one for disclosure with a total of 10 requirements and other for measurement with a total of 9 requirements. In this way, we calculate compliance regarding disclosure and measurement, separately. The calculation of the values of the dependent variable will be as follows:

$$Comp = \frac{\sum Convergent\ answers}{19} \quad (2)$$

$$\text{Disclosure Comp} = \frac{\sum \text{Convergent anwers}}{10} \quad (3)$$

$$\text{Measurment Comp} = \frac{\sum \text{Convergent anwers}}{9} \quad (4)$$

Therefore, these indices for each entity vary between 0 (indicator of absence of any compliance) and 1 (full compliance of the items included).

3.3. Questionnaire of compliance

A questionnaire is a tool for collecting data, through a set of written questions with the aim of obtaining information or opinions about a wide range of individuals Denis et al. (2012). When constructing the questionnaire, it was decided to use multiple choice questions with the aim of obtaining a compliance index.

This questionnaire is organized into 3 groups: A—statistical data, includes questions about the respondent's demographics, defining their profile and that of the firm, such as gender, age and experience. Group B—disclosure requirements which allows us the assessment whether firms disclose financial information in their financial statements in accordance to the requirements of PPE accounting standard. Group C—measurement requirements which allows us to check whether the accounting policies used, namely regarding subsequent measurement option and estimations are in accordance with the standard for PPE. It was performed a pre-test by sending the questionnaire until it is believed that there are no difficulties in completing and interpreting it.

4. Results and discussion

This section presents and analyses the empirical evidence on the level of compliance of accounting practices with the requirements of the PPE standard by Portuguese firms. In addition, the results regarding the different factors that influence this compliance are obtained through estimation regressions using R Studio software.

4.1. Descriptive statistics

Table 1 documents the descriptive statistics of the dependent and independent variables used in this study. As it is possible to see, the overall compliance index is approximately 54% and varies between 16% and 100%. Additionally, the disclosure compliance present mean value is higher than the measurement, specifically 66% and 40%, respectively. Thus, the levels of compliance are not very high, with the disclosure compliance being higher than the measure one, as can be seen in **Figure 1**.

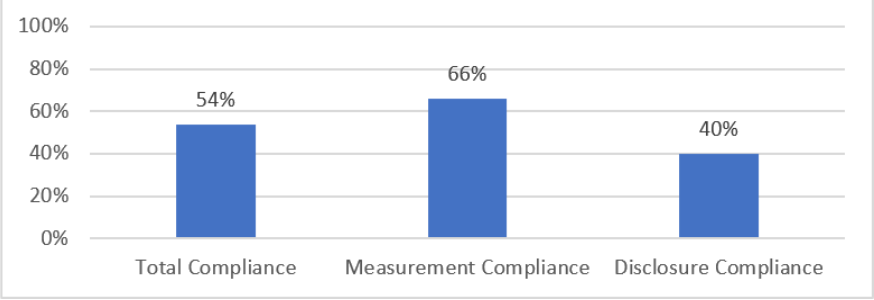

Figure 1. Levels of PPE compliance.

In addition, the measurement index presents 0 as the minimum value, which means that there is at least one entity that does not comply with any of the measurement requirements of the PPE standard. Meanwhile, all indices have a maximum value of 1, so we can conclude that at least one entity presents a full compliance with the requirements of the PPE standard. These results on the compliance variable constitute a first justification for the relevance of our study.

Table 1. Descriptive statistics.

Variable	No. obs.	Min	Max	Mean	Median	St. dev.
Comp	282	0.16	1	0.5379	0.53	0.154
Disclosure comp	282	0.2	1	0.6606	0.7	0.1624
Measurement comp	282	0	1	0.4001	0,33	0.2185
Size	282	482.272	3,001,485	60,123.78	13,423.83	262,159.3
Debt	282	0.0149	4.541	0.553	0.5175	0.4713
ROE	282	−7.567	1.8876	0.0882	0.0799	0.5643
Liq	282	0.1094	22.8854	2.1331	1.626	2.1383
Audit (Big Four)	52	18%				
Audit (Outhers)	230	82%				

Regarding drivers of compliance, size has a large dispersion taking into account the standard deviation, maximum and minimum values. These results are partly explained by the volatility of the PPEs of the sample firms. Debt varies between 0.0149 and 4.541, with an average of 0.553, which means that, on average, debt capital finances 55.30% of firms' assets. The ROE has a minimum negative value of 7.567 and a maximum positive value of 1.8876, where net results represent 8.82% of equity on average. Liq has an average value of 2.1331, indicating that, on average, firms are financially stable and are able to fulfill their responsibilities in the short term. Regarding audits, only 18% of firms are audited by the Big Four, while 82% of firms are audited by other auditing firms.

Table 2. Coefficients of Pearson correlation.

	Comp	Disclosure comp	Measurement comp	Size	Debt	Audit	ROE	Liq
Comp	1							
Disclosure comp	0.1180	1						
Measurement comp	0.8547	0.0993	1					
Size	0.1180	1	0.0993	1				
Debt	0.0893	−0.1042	0.1858	−0.1042	1			
Audit	0.1052	0.2733	0.0986	0.2733	−0.0198	1		
ROE	0.0504	−0.0099	0.0269	−0.0099	−0.0144	0.0040	1	
Liq	−0.1309	0.6739	−0.1242	0.6739	−0.3552	0.0980	0.0664	1

Table 2 has the Pearson correlations which show that the size variable and the disclosure compliance index assume a perfect positive correlation. The correlations with the independent variable are higher for the general disclosure index. Between the variable size and liquidity, the correlation is moderate. Furthermore, we can conclude

that the Debt and Liq variables have a weak negative correlation, which predicts that if the level of debt increases, the level of liquidity decreases, or vice versa.

4.2. Econometric results and discussion

Table 3 contains the estimation results for the determinants of the three compliance indices: overall (model 1), disclosure (model 2) and measurement (model 3).

Table 3. Determinants for compliance indices.

	Expected sign	Model 1	Model 2	Model 3
β0 Constant	+	0.2684*** (3.932)	0.4027*** (5.602)	0.1171 (1.203)
β1 Size	+	0.0295*** (4.128)	0.0318*** (4,244)	0.0269** (2.646)
β2 Debt	+	0.0232 (1.145)	−0.0282 (−1.324)	0.0814** (2.822)
β3 Audit	+	0.0048 (0.19)	−0.0119 (−0.448)	0.0229 (0.638)
β4 ROE	+	0.0191 (1.209)	0.0224 (1.347)	0.0158 (0.702)
β5 Liq	−	−0.0137** (−2.995)	−0.0151** (−3.121)	−0.0122 (−1.859)
F-statistic:		5.652***	5.3***	4.468***
Adjusted R^2:		0.0764	0.0711	0.0581

***, **, represents a statistical level of 0.1%, 1% and 10%, respectively.
() *t*-statistics.

Based on **Table 3**, the coefficient of adjusted R^2 is mostly close to 8% in the estimated regressions. Taking into account the *F*-statistic, in all models there is at least one significant explanatory variable for each level of compliance.

In the overall compliance, the variables of Size and Liq are statistically significant at a 0.1% and 1% level, respectively, converging with the correlation level calculated in preliminary descriptive statistics.

The sign of the association between Size and Comp is positive, consistent with (Costa and Alves, 2015; Dumontier and Raffournier, 1998; El-Rabat et al., 2023; Erdem et al., 2017; Francis et al., 2005; Kalbuana et al., 2021). In fact, this may be due to larger firms being under more scrutiny and they tend to exhibit higher information quality which is consistent with higher compliance between accounting standard and accounting practice for PPE. Therefore, this result allows to support H1. On the other hand, the negative estimated sign of the Liq variable is consistent with (Al-Akra et al., 2010). Therefore, firms with a higher degree of liquidity are those that least comply with the requirements of IAS 16, as they are less susceptible to public scrutiny because they are less dependent of external funds, and thus have lower exposure to agency costs. This result allows to support H5. The other variables, namely debt, ROE, and Audit, are not statistically significant, which, in turns, do not allow us to support the H2, H3 and H4. This may be due to the reduced number of observations and the heterogeneity of the firms in the sample.

To further develop this research regarding the determinants of compliance between accounting practice and accounting standards for the overall compliance into measurement and disclosure compliance. The results for both compliances are documented in **Table 3** through the Model 2 and Model 3, respectively.

Concerning discloser compliance, the Size and Liq variables have the same level of significance as in the global regression analysis (Model 1) and their signs are consistent with the expected, specifically positive for Size and negative for Liq, the same result as the overall compliance. The variables debt and Audit do not assume any level of significance which is in accordance with Dumontier and Raffournier (1998). Regarding measurement compliance, it proves to be slightly different from the global compliance and disclosure index. FSize variable is significant at the 1% level, suggesting that larger firms exhibit a greater degree of measurement compliance with the requirements of PPE standard. The debt variable becomes statistically significant at the 1% level, similar to Erdem et al. (2017), Francis et al. (2005), Cerqueira and Pereira (2020), Lee et al. (2015), Sequeira et al. (2024), Al-Akra et al. (2010). Therefore, the most indebted firms tend to meet more measurement requirements for PPE. In the case of the Liq variable, it has a significance level of 10% and maintains the negative influence on the model, which is consistent with (Al-Akra et al., 2010).

The evidence found shows the overall compliance of accounting standards and their application is not high, and it is close to 50%. This compliance is bigger for disclosure requirements rather than for measurement requirements, 66% and 40%, respectively. These pieces of evidence show that some efforts are needed to improve these compliances allowing firms to give better information to their stakeholders and then to enhance their legitimacy. Therefore, it is important to examine the drives of these compliances. The results of this research suggest that larger firms are those that disclose higher quality financial information, which is consistent with political cost, agency and signaling theories. In fact, larger firms are under more political costs, then they aim to mitigate these costs, namely by improving financial information quality. By contrast, if firms exhibit high liquidity, they have less incentive to improve their financial reporting quality because they do not have to capture creditors/investors' confidence. In addition, we find that debt tends to positively affect the compliance between standards and its appliance, but just in terms of measurement. This is consistent with firms with higher levels of indebtedness having more debt restrictions and difficulties in obtaining additional funds. Therefore, one strategy consists of gaining creditors' confidence by disclosing financial information of high quality. These constraints are particularly important in economies characterized by a lack of liquidity, as is the case in the Portuguese financial market.

5. Conclusions

This study analyzes and quantifies the degree of compliance of accounting practice with the disclosure and measurement requirements established by accounting standards for PPE. We propose three compliance indices, general, disclosure and measurement, using a questionnaire addressed to Portuguese firms.

The empirical evidence shows that the level of compliance between the accounting standard for PPE and accounting practice is 54%, which is higher for disclosure rather than measurement. The higher the level of compliance with accounting standards, the higher the quality of financial information. Given that we find empirical evidence that the levels of compliance are not high, some efforts need to be developed to improve these compliance levels in order to allow investors,

creditors, and others to make efficient decisions and then increase the legitimacy of firms. Therefore, we investigate their drives, whether at the level of disclosure or at the level of measurement. We find that larger firms comply with more disclosure and measurement requirements. On the other hand, the results show that liquidity conditions affect compliance both in general and in disclosure, presenting a negative relationship suggesting that firms with more liquidity are those that are least likely to comply with the compliance requirements of accounting practice, which may be due to the fact that firms do not depend on creditors to obtain funds. In addition, for measurement compliance, we find that debt tends to positively affect it, being consistent with the agency theory, that is, the higher quality of financial reporting reduces the information asymmetry between economic agents within the firm and external ones. In fact, this result suggests that the quality of information tends to be higher and therefore less subject to earnings management in measurement practices than in disclosure practices. Hence, these results suggest that, among the sample firms, the larger ones recognize the benefits of disclosing good signals to the market disclosing high-quality financial information which in turn means greater compliance between accounting standards and practice. The more liquid firms refrain from communicating good signs to the market, mainly to creditors, because they are less dependent on financing. In the case of leveraged firms, they are committed to more compliance, particularly overall and measurement compliance, in order to capture stakeholders' confidence.

Overall, this study provides evidence regarding the levels of compliance between accounting practice and accounting standards for PPE, which in turn allows us to assess financial reporting quality, making it useful for professionals, stakeholders and regulators. This is particularly important for transmitting corporate signals to the market, strengthening creditor confidence and attracting investors. Complementarily, the study helps policymakers to design legislative strategies based on monitoring compliance between the standard and accounting practice. In addition, collecting data straight from accountants offers a robust method for understanding real-world practices. Furthermore, this article also contributes to the debate of explanatory factors for compliance with measurement and disclosure requirements for PPE and accounting practice. Addressing compliance with international standards is crucial as more firms globally are expected to adopt these standards.

During the study, some limitations arose, mainly in obtaining responses to the questionnaire. Therefore, future research would benefit from developing longitudinal studies to assess changes in compliance over time, as well as expanding the sample to include more than listed companies with consolidated accounts, provided they voluntarily adopt IFRS. Another recommendation is to include firms from other countries, as the accounting international standards are adopted worldwide, but taking into account country differences may lead to specific accounting practices and then to specific adjustments.

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