Differential reporting and earnings quality: is more better?

Mario Daniele
Catholic University of the Sacred Heart, Milan, Italy

Abstract
Purpose – When financial statements are public, the choice between alternative reporting regimes constitutes a signal that addresses external stakeholders. Generally, the choice of more complex regimes acts as a complement of firms’ transparency. However, in the absence of audits, opportunistic behaviors could be incentivized. This study aims to test whether SMEs’ choice between alternative accounting regimes is associated with earnings quality.

Design/methodology/approach – Drawing on the literature about accounting choices and earnings quality, this study investigates whether the same conclusions are confirmed for SMEs. Using a sample of 4,054 Italian companies and 12,114 observations, it compared four earnings quality proxies of a group of companies that opted for the “Full” rules and those of a subsample of the population of companies that applied the Simplified rules.

Findings – The results suggest that the signaling power of accounting rules’ choice could lead to wrong conclusions for SMEs. Indeed, a positive relationship emerged (H1) between the choice of the “Full” rules and income smoothing behaviors, while the same choice appears to reduce the probability to disclose SPOS. Moreover, the results suggest that opportunistic behaviors are more frequent for firms that have settled in a “non-cooperative” social environment (H2).

Research limitations/implications – This study could foster research on financial reporting quality in private firms.

Practical implications – Comparing the quality of financial statements drawn up according to two alternative accounting regimes could provide useful suggestions for both users and regulators.

Originality/value – The results contribute to the limited literature on the implications of differential reporting. Finally, it enriches the literature about heterogeneity in accounting quality within private firms.

Keywords Differential reporting, Earnings quality, SME, Reporting environment

Paper type Research paper

1. Introduction
Differential reporting became a relevant matter around 2003, when the discussion about the introduction of Simplified accounting rules for SMEs (cd. differential reporting) attracted general interest in accounting studies (For a review, see Evans et al., 2005; Mkasiwa, 2014). Since then, different users, information needs and cost-benefits assessments have been identified as rationales for the presence of a set of accounting rules devoted to the smallest entities (Jarvis, 2003; Evans et al., 2005; Baldarelli et al., 2012; Deaconu et al., 2009).

Accordingly, both the EU Accounting Directive (Dir. 2013/34/EU) and the International Financial Reporting Standards (IFRS) have provided a set of Full standards and a separate set of Simplified rules for smaller entities. The grounds of this choice are summarized in Dir. 2013/34/EU, which states that “users of financial statements typically have a limited need for supplementary information from small undertakings, and it can be costly for small undertakings to collate that supplementary information.” Once enforced, the Simplified rules represent a burden only for national regulators, who cannot request the provision of

© Mario Daniele. Published by Emerald Publishing Limited. This article is published under the Creative Commons Attribution (CC BY 4.0) licence. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at http://creativecommons.org/licences/by/4.0/legalcode
additional mandatory financial information. At the same time, companies are not prevented from choosing the Full rules.

Therefore, when drawing up financial statements, SMEs must deal with the choice between Simplified and Full accounting rules. At the very least, this choice may affect the costs related to the preparation of financial information, the level of disclosure and the accounting quality. While the first two effects are related to the structure of the Simplified accounting rules (which generally require the drawing up of an abridged version of the Balance Sheet, Income Statement and Notes and consequently are both less expensive and detailed than the Full ones), the implications of the choice between alternative sets of accounting rules on accounting quality have not been investigated yet.

This paper contributes to the literature in several ways. First, to the best of our knowledge, this is the first study that examines the relationship between the choice of accounting rules - including the Simplified ones - and accounting quality for small and medium-sized entities. Therefore, this study adds both to the literature that addresses the relationship between accounting choices and earnings quality (Francis et al., 2008a; Ciftci, 2010; Blanco et al., 2014) and that regarding financial reporting quality in private firms (Ball and Shivakumar 2005, 2006; Hope et al., 2013; Haw et al., 2014; Bassemir and Novotny-Farkas, 2018; Liu and Skerratt, 2018; Sánchez-Ballesta and Yagüe, 2021; Beuselinck et al., 2021). This study also contributes to the limited literature on the implications of the presence of different reporting regimes (Burgstahler et al., 2006; Hope et al., 2013; Liu and Skerratt, 2018; Bassemir and Novotny-Farkas, 2018). Finally, by investigating the impact of different socio-economic environments on the relation between accounting choice and earnings quality, this study enriches the currently scarce literature about heterogeneity in accounting quality within private firms (Hope and Vyas, 2017; Bassemir and Novotny-Farkas, 2018; Beuselinck et al., 2021).

In terms of managerial implications, our study can provide useful suggestions for users of SMEs’ financial information. Indeed, it has been observed that the choice of different accounting rules could influence users’ perception of reporting quality (DeZoort et al., 2017). Understanding the relation between this choice and earnings quality is could therefore be helpful in detecting opportunistic behaviors.

The results of this study also offer significant implications in terms of policy. In fact, Simplified accounting rules, despite being implemented by the majority of SMEs, are under investigated. As a consequence, comparing the quality of financial statements that have been drawn up according to these two accounting regimes could provide useful suggestions for regulators.

The remainder of the paper is organized as follows. Section 2 briefly describes the regulatory accounting environment in the European context and in Italy. Section 3 reviews the relevant literature for the formulation of the hypotheses. Section 4 illustrates the research design. Section 5 presents the results and offers a discussion. Section 6 contains the robustness check, while Section 7 draws some conclusions.

2. Differential reporting in Europe: the Italian case

The process that led to a size-based differential accounting system in Europe started in 2002 (Regulation N. 1606/2002). With the aim to reduce the burden of legislation for SMEs, the European Commission started from financial reporting requirements (European Commission, 2007) by allowing member states to enforce Simplified accounting rules for SMEs.

The current differential reporting regime was enforced by Directive 34/EU/2013. Indeed, while fostering the harmonization process between the European reporting framework and the IFRS, the Directive acknowledged the burden of financial reporting for small companies and therefore allowed Member States to exempt them from most of the requirements applicable to larger entities.
The reporting framework resulting from the implementation of the Directive is, thus, three-fold.

Indeed, within national GAAPs, most EU countries provided one set of Full rules for their largest enterprises, one set of “Simplified” rules for SMEs and one set of “ultra-Simplified” rules for micro-entities. In this context, while the Full rules share many common points with the IFRS (Di Pietra, 2017), the provision of simplified measurement criteria for assets and liabilities has rendered the Simplified regimes substantially different from the first.

Focusing on Italy, Simplified rules are regulated by art. 2435 bis of the Civil Code [1]. Companies that remain within relevant size thresholds (Total assets: below €4.4m; Total revenues: below €8.8m; and Number of employees: below 50) are allowed to draw up an abridged version of the Balance Sheet, Income Statement and Notes. As opposed to those who adopted the Full rules, these companies are also exempted from the preparation of the Cash Flow Statement and the Management Report. Finally, Full rules require the evaluation of receivables and debts at the amortized cost and the measure of marketable securities at the lower value between the historical cost and the estimated realizable value. The Simplified ones, instead, allow receivables to be measured at the estimated realizable value, debts at their nominal value and marketable securities are evaluated according to their acquisition cost.

The substantial reduction of the amount and complexity of disclosure resulting from the Simplified rules significantly benefits companies. Indeed, it could reduce both their direct costs for the drawing up of annual financial statements and indirect costs related to the disclosure of strategic information [2].

Considering that the Italian economic system is generally considered an “insider economy” (Burgstahler et al., 2006), where companies establish close relationships with banks and where SMEs are prevalently funded via private channels, all eligible companies should be incentivized to opt for the Simplified rules. Indeed, this choice benefits SMEs without hindering the flow of information toward core stakeholders. Nevertheless, Simplified rules are not mandatory, and companies can opt for the Full rules if they perceive that this choice is beneficial for them. Several reasons may influence the choice between Simplified and Full rules. First, SMEs are usually family-owned and controlled, so the choice may be intended to protect the socio-emotional wealth of the family (Gomez-Mejia et al., 2014). Second, SMEs can devote limited resources to the drawing up of financial statements (Dir. 2013/34/EU). Thus, the choice may be influenced by the availability of human and financial resources. Third, SMEs’ accounting choices may be influenced by the geographical-social context in which they are located (Putnam et al., 1993; Tabellini, 2010; Daske et al., 2013).

Whatever the reason, in a context where financial statements are public, the choice to adopt the most complex rules can be considered a signal (Liu and Skerrat, 2018; Palazuelos et al., 2019) for the external users of financial information. The aim of this research is therefore that of understanding whether this signal is related to better quality of financial information or not.

3. Earnings quality for SMEs

The greatest part of the literature on earnings quality is focused on public companies. In accordance with the “opportunistic behaviour hypothesis” (De Meyere et al., 2018), it is supposed that public firms are subjected to pressure from the market to meet earnings targets. Therefore, they should have greater incentives to engage in earnings management than private ones (Givoly et al., 2010). However, several studies have observed that earnings management is higher (and earnings quality lower) for private than for public firms, and this evidence has been confirmed in different contexts. Among others, Beatty and Harris (1999), on focusing on the banking sector, observed higher earnings quality in public firms; Ball and
Shivakumar (2005) reported the same trend in the UK; more recently, Hope et al. (2013) confirmed this trend in the USA. As reported by Liu and Skerratt (2018), a small number of studies focused on private firms have considered different reporting regimes. In particular, Burgstahler et al. (2006) confirmed that, among large European companies adopting different reporting regimes, private companies are involved in higher levels of earnings management than public ones. Hope et al. (2013), while focusing on US companies, observed that private companies generally exhibit a higher level of earnings management, while this trend disappears in settings where public firms are more likely to manage earnings. More recently, Bassemir and Novotny-Parkas (2018) investigated the effect of IFRS voluntary adoption on financial reporting quality and, after identifying different types of IFRS adopters, found evidence on IFRS’ contribution to earnings quality.

In general, these studies suggest that private companies will have lower earnings quality when they are under a less restrictive reporting regime (Liu and Skerratt, 2018), implying that ceteris paribus the choice of more complex accounting rules should ensure higher earnings quality.

In the context of our research, Full rules adopters must draw up and publish a Cash Flow Statement and a Management Report. Furthermore, their Balance Sheet, Income Statement and Notes are significantly detailed. In contrast, the concise narrative disclosure requested from Simplified rules adopters and the absence of a Cash Flow Statement prevent users from getting a complete picture of a company’s financial position and economics performance, thus providing room for opportunistic behaviors [3]. The voluntary choice of the Full rules could thus be read as a signal of firms’ commitment to publishing high-quality financial information and willingness to disclose additional information.

From a different point of view, SMEs have several incentives to engage in earnings management behaviors. First, since the users of financial statements are mainly banks and financial institutions, income smoothing behaviors could be helpful in order to stabilize economic and financial performance and maintain the credit score. Second, as the corporate income tax strictly depends on the net income/loss arising from the Income Statement, income smoothing behaviors could be intended to manage the tax burden [4]. Moreover, the choice to disclose small positive earnings (SPOS) could be aimed at avoiding unfavorable fiscal disciplines for companies with systematic losses. Third, since most SMEs are family-owned and controlled, earnings management behaviors could be motivated by the desire to protect families’ non-economic benefits (e.g. reputation, identification with the company), thus avoiding the disclosure of losses that could be a signal of the family’s failure to manage the business.

As a result, in line with previous literature (Soderstrom and Sun, 2007), the expectation is that earnings management behaviors are more frequent in a context where the level of disclosure is limited. Indeed, when disclosure and earnings quality act as complements (Francis et al., 2008a; Blanco et al., 2014), the lower comprehensiveness of the Simplified rules could be in itself an incentive for opportunistic managers.

Accordingly, the first hypothesis may be stated as follows:

**H1.** There is a positive relationship between the choice of the Full rules and earnings quality.

The choice to opt for the Full rules requires human and financial resources to comply with the relevant regulations. However, at present, most national regulations do not require any form of auditing on SMEs’ financial statements. Companies can therefore be incentivized to take advantage of the reputational benefits related to this choice without improving financial reporting’s quality or bearing the related costs.

Previous research has already investigated these opportunistic behaviors with reference to the voluntary choice of IFRS (Leuz, 2010; Brown, 2011; Pope and McLeay, 2011; Cameran
They suggest that the choice of a more complex accounting system is not related to an increase in accounting quality per se. Rather, different incentives may impact on the consequences of this choice.

When dealing with alternative reporting regimes, firms have considerable discretion in how they implement the new standards. Daske et al. (2013) identify two types of adopters: for «label adopters» the choice of the ordinary regime may not be related to an increase in earnings quality, while «serious adopters» may be more committed to draw up high-quality financial statements.

In our specific context, the complementary function between the choice of the Full rules and earnings quality is strictly related to the costs of the choice and to users’ ability to perceive firms’ commitment toward high-quality financial information (Francis et al., 2008b). When the choice of the Full rules is costless, managers are incentivized to benefit from the “reputational effect” (Cameran et al., 2014) of the Full rules without any significant improvement in earnings quality.

Previous literature (Ball, 2006; Daske et al., 2013) observed that these costs could be avoided in contexts with low-quality institutions where stakeholders could be unable to distinguish between “label” and “serious” adopters, thus fostering the presence of the former.

Focusing specifically on Italy, Putnam et al. (1993) introduced the distinction between “cooperative” and “non-cooperative” social environments. The former are characterized by strong institutions, generalized reciprocity and cooperation, and by a social contract that “is not legal but moral”. In the latter, instead, weak institutions foster mutual distrust and a social contract that is based on legal norms. In a “cooperative” environment, users should be able to distinguish between “label” and “serious” adopters. In such a context, managers will not benefit from a “label” choice of the Full rules since opportunistic behaviors can be easily detected and punished. Moreover, financial information will generally be perceived as reliable, and the signal related to the adoption of a more complex set of accounting standards will be limited. Consequently, a greater number of “serious adopters” is expected. In contrast, in a “non-cooperative” environment, external stakeholders may not be able to distinguish between “label” and “serious” adopters. In the meanwhile, the relevance of legal norms strengthens the signaling power of the choice of the Full rules. In the absence of any form of audit, this choice could increase the perceived legitimation of the company in the market even in the absence of any increase in earnings quality. Companies are incentivized to take advantage of the benefits related to a “label” choice without bearing the related costs. Therefore, a greater number of “label adopters” is expected.

H2. The relation between the choice of the Full rules and earnings quality differs between companies located in a “cooperative” environment and those in a “non-cooperative” environment.

4. Methods
4.1 Sample selection
The empirical setting is provided by Italian non-financial companies that, despite being eligible to adopt the Simplified regime, voluntarily chose the Full rules for the drawing up of their annual financial reports for at least three financial years (2016–2017–2018). This choice is motivated by the need to observe firms that made a “permanent” switch toward the Full rules [5]. The firms under analysis are characterized by the following size thresholds: (1) Total assets below €4.4m; (2) Total revenues below €8.8m; (3) Number of employees below 50. To ensure comparability within the sample, only unconsolidated limited liability companies are included. The resulting sample is thus composed of 2,027 companies.
The choice of Italy as the empirical setting of this study is based on two main reasons. First, the characteristics of the Full rules, which became closer to those of the IFRS after the 2015 reform (Di Pietra, 2017), significantly diverge from those of the Simplified ones [6]. As a consequence, the choice of the Full rules can be considered as particularly burdensome as opposed to the Simplified rules. Second, Italy features a strict social and cultural dichotomy between North and South (Putnam et al., 1993; Tabellini, 2010), which, respectively, represent a “cooperative” and a “non-cooperative” social environment.

Indeed, while in Northern Italy, civil engagement is led by reciprocity and networks, in Southern Italy, social relations are “vertically structured” and law-based. As a result, a greater number of “serious adopters” in Northern Italy is expected. In such a context, companies would not benefit from a “label” choice of the Full rules, as the mere reputational effect of that choice is limited. On the contrary, for Southern companies the signal related to the choice of the Full rules is stronger; consequently, companies are more incentivized toward a “label” choice.

For each company, all the financial information available in the AIDA (Bureau van Dick) database for Italian companies on the 2016 to 2019 period is collected. Data related to 2020, which incorporate the effect of the COVID-19 pandemic and therefore may distort the results of the empirical analysis, is excluded from the present analysis.

In order to create a control sample from the larger population of companies that adopted the Simplified rules in the same years (115,324), the propensity-score matching technique, as proposed by Rosembaum and Rubin (1983), was applied. This technique matches observations on some relevant dimensions from two groups using the estimated likelihood of receiving treatment (Shipman et al., 2017). In the context of this study, the matching is performed on three-dimensional thresholds that are relevant for the choice in accounting rules (total assets, total revenues and number of employees) and measured in relation to FY 2016–2017–2018. Thus, in line with the adoption of EU regulations (Directive 34/EU/2013), it is assumed that, ceteris paribus, similar companies in terms of total assets, total revenues and number of employees should have comparable information needs and perform equivalent cost-benefit assessments. Moreover, in order to balance the geographical distribution of the control group, the macro-region of settlement (North vs South) [7] is included among matching variables. The matching procedure allows the treatment group (Full rules adopters) and the control group (Simplified rules adopters) to be identified. The final sample is composed of 4,054 firms and 12,114 firm-year observations (the sample does not include 48 observations for 2019 due to missing data).

4.2 Earnings quality
Previous literature has traditionally identified three measures of earnings quality: earnings management, timely loss recognition and value relevance (Dechow et al., 2010; Cameran et al., 2014). Since the present study investigates the behaviors of companies that draw up simplified financial statements, some data (such as market value, discretionary accruals [8], operating cash flows) are not available. For this reason, an adaptation effort was needed to determine the relevant measures.

Following Barth et al. (2008) and Bassemir and Novotny-Farkas (2018), the present study sustains that, all other things being equal, lower levels of earnings management indicate higher earnings quality. Thus, in order to assess if the choice of more complex accounting rules impacts accounting quality, the level of earnings management is compared between the entire population of companies that chose the Full rules and the matched group of SMEs that draw up financial reports according to the Simplified regime. In particular, the study examines (1) income smoothing behaviors and (2) small positive earnings (SPOS).
First, it is assumed that earnings quality should be negatively related to income smoothing behavior. Indeed, firms that promptly recognize gains and losses should exhibit (1) higher earnings variability ($\Delta NI$), (2) higher variability of earnings in relation to cash flows ($\Delta NI / \Delta CF$) and (3) lower negative correlation between ACC and CF than firms engaging in income smoothing behavior.

In accordance with Barth et al. (2008), the first empirical metric is defined as the variance of the residuals of the following random effects panel regression model:

**MODEL 1**

$$
\Delta NI_{it} (Earnings \ variability) = a_0 + a_1 Size_{it} + a_2 SalesGrowth_{it} + a_3 FinLeverage_{it} + a_4 CF_{it} + a_5 Audit_{it} + a_6 Industry_{it} + a_7 Year_{i} + u_i + \epsilon_{it}
$$

The dependent variable $\Delta NI$ is defined as the change in Net Income scaled by end-of-year Total Assets; SIZE is the natural logarithm of total assets; SALESGROWTH is the change in Net Sales; FINLEVERAGE is the ratio between Total Debt (both short and long term); and Total Equity. As regards CF, in the absence of a Cash Flow Statement for the companies that opted for the Simplified rules, an indirect simplified measure for all sampled companies [9] that is scaled by end-of-year Total Assets was built; AUDIT is a dummy variable that is set to 1 if companies’ financial statements are audited and 0 otherwise; INDUSTRY is a set of dummy variables representing the macro-sector of the company’s activity according to the NACE classification [10]. Finally, the year of observation (YEAR) is included among the control variables.

Once the residuals are determined, the $F$-test is implemented in order to compare the variance between the two groups. Coherently with the previously presented hypotheses, the target group is expected to show a higher value of variance compared to the control group.

The second empirical metric is then defined as the standard deviation of earnings variability divided by the standard deviation of Cash flows variability determined through the following random effects panel regression model:

**MODEL 2**

$$
\Delta CF_{it} (Cash \ flows \ variability) = a_0 + a_1 Size_{it} + a_2 SalesGrowth_{it} + a_3 FinLeverage_{it} + a_4 CF_{it} + a_5 Audit_{it} + a_6 Industry_{it} + a_7 Year_{i} + u_i + \epsilon_{it}
$$

In this case, the dependent variable is defined as the change in Operating Cash Flow scaled by end-of-year Total Assets. The control variables remain unchanged.

Once more, after the prediction of the ratio between $\Delta NI$ and $\Delta CF$ residuals, the $F$-test is used to compare their variance in the target and control groups. Since earnings management is related to a lower variability of $\Delta NI$ on $\Delta CF$, the target group is expected to show a higher value of variance than the control group.

Second, in order to measure earnings management behaviors through small positive earnings (SPOS), the probability of small positive profits is measured through a logistic regression model with robust standard errors that is defined as follows:

**MODEL 3**

$$
FULL_{it} = a_0 + a_1 Size_{it} + a_2 SalesGrowth_{it} + a_3 FinLeverage_{it} + a_4 CF_{it} + a_5 Audit_{it} + a_6 Industry_{it} + a_7 SPOS_{it} + a_8 Year_{i} + u_i + \epsilon_{it}
$$
The dependent variable FULL is a dummy variable that is set to 1 if the company opted for the Full rules and 0 otherwise, while the variable of interest SPOS is defined as a dummy variable that is set to 1 when the ratio between the net income and total asset is between 0 and 0.01 and 0 otherwise. The remaining control variables remain unchanged.

In order to determine if the probability of adopting the Full rules is influenced by the presence of Small Positive Earnings, the sign and coefficient of the variable SPOS are observed and analyzed. *Ceteris paribus*, a negative coefficient implies that firms reporting small positive earnings have a lower probability to opt for the Full rules [11].

Third, in order to measure the correlation between accruals (ACC) that, in accordance with Barth *et al.* (2008), are measured as the difference between NI and CF, and operating cash flows (CF), the residuals of the two regression models (Model 4 and 5) estimating both variables are measured.

**MODEL 4**

\[
ACC_{it} = a_0 + a_1Size_{it} + a_2SalesGrowth_{it} + a_3FinLeverage_{it} + a_4CF_{it} + a_5Audit_{it} \\
+ a_6Industry_{it} + a_7Year_t + u_i + \epsilon_{it}
\]

**MODEL 5**

\[
CF_{it} = a_0 + a_1Size_{it} + a_2SalesGrowth_{it} + a_3FinLeverage_{it} + a_4Audit_{it} + a_5Industry_{it} \\
+ a_6Year_t + u_i + \epsilon_{it}
\]

The control variables for Models 4 and 5 are unchanged except for the CF, which is excluded from Model 5.

Once the residuals are predicted, the Spearman correlation between accruals and operating cash flows for the two groups (Full rules vs Simplified rules) is measured. According to Barth *et al.* (2008), a less negative correlation implies higher earnings quality.

Thus, H1 will be tested comparing the four proxies for earnings quality defined above (variability of net income, variability of net income over cash flows, small positive earnings and correlation between accruals and cash flows) between the group of companies that opted for the Full rules (target group) and the matched group of Simplified rules adopters (control group).

In order to test H2, the reporting environment is captured through the variable DU_SOUTH, which takes value 1 if the company is based in the South and 0 otherwise. As mentioned above, the strict social and cultural dichotomy between North and South (Putnam *et al.*, 1993; Tabellini, 2010) is expected to have an impact on the relation between the choice of accounting rules and the accounting quality. The sample will therefore be split into two groups (North-based and South-based companies) in order to assess if the choice of Full rules in cooperative and non-cooperative environments has a different impact on earnings quality.

Furthermore, with the aim of analyzing the impact of the reporting environment on the relation between the choice of accounting rules and the probability of managing earnings through SPOS, an interaction term between the variables DU_SOUTH and FULL is added in Model 6. The model is defined as follows:
MODEL 6

\[ \text{FULL}_{it} = a_0 + a_1 \text{Size}_{it} + a_2 \text{SalesGrowth}_{it} + a_3 \text{FinLeverage}_{it} + a_4 \text{CF}_{it} + a_5 \text{Auditors}_{it} \]
\[ + a_6 \text{Industry}_{it} + a_7 \text{ST(DU_SOUTH)}_{it} + a_8 \text{ST(SPOS)}_{it} + a_9 \text{SOUTH} \times \text{SPOS}_{it} \]
\[ + a_{10} \text{Year}_i + u_i + \epsilon_{it} \]

In addition to the variables included in Model 3, Model 6 includes the standardized value of DU_SOUTH and SPOS and the interaction between them.

4.3 Descriptive statistics

The descriptive statistics summarized in Table 1 suggest that the standard deviation of \( \Delta \text{CF} \) for the sampled companies is higher than \( \Delta \text{NI} \). Moreover, the presence of small positive earnings is concentrated in the last quartile. As for the control variables, the results show that sampled companies are highly indebted, as the average FINLEVERAGE is 5.597 (Median = 2.473). Finally, only 20.5% of companies’ financial reports are audited, while 42.4% of the sampled companies are based in the South.

The analysis of the correlation matrix (Table 2) shows that \( \Delta \text{NI} \) and \( \Delta \text{CF} \) are positively correlated with \( \text{SALESGROWTH} \) and \( \text{CF} \), as intuitively expected. The variable SPOS is positively related to \( \text{SIZE} \), FINLEVERAGE and DU_SOUTH and negatively correlated to

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>M</th>
<th>Median</th>
<th>SD</th>
<th>First quartile</th>
<th>Third quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \Delta \text{NI} )</td>
<td>12,114</td>
<td>0.000</td>
<td>0.001</td>
<td>0.122</td>
<td>-0.013</td>
<td>0.018</td>
</tr>
<tr>
<td>( \Delta \text{CF} )</td>
<td>12,016</td>
<td>-0.001</td>
<td>0.004</td>
<td>0.234</td>
<td>-0.083</td>
<td>0.090</td>
</tr>
<tr>
<td>( \text{ACC} )</td>
<td>12,114</td>
<td>0.013</td>
<td>0.004</td>
<td>0.896</td>
<td>-0.004</td>
<td>0.026</td>
</tr>
<tr>
<td>( \text{SPOS} )</td>
<td>12,114</td>
<td>0.239</td>
<td>0.000</td>
<td>0.427</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>( \text{SIZE} )</td>
<td>12,114</td>
<td>7.343</td>
<td>7.58</td>
<td>0.710</td>
<td>6.866</td>
<td>7.914</td>
</tr>
<tr>
<td>( \text{SALESGROWTH} )</td>
<td>12,114</td>
<td>0.052</td>
<td>0.023</td>
<td>0.283</td>
<td>-0.063</td>
<td>0.124</td>
</tr>
<tr>
<td>( \text{FINLEVERAGE} )</td>
<td>12,114</td>
<td>5.597</td>
<td>2.473</td>
<td>145.015</td>
<td>0.990</td>
<td>6.096</td>
</tr>
<tr>
<td>( \text{CF} )</td>
<td>12,114</td>
<td>0.084</td>
<td>0.075</td>
<td>0.161</td>
<td>0.016</td>
<td>0.152</td>
</tr>
<tr>
<td>( \text{AUDIT} )</td>
<td>12,114</td>
<td>0.205</td>
<td>0.000</td>
<td>0.404</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>( \text{DU_MANUF} )</td>
<td>12,114</td>
<td>0.426</td>
<td>0.000</td>
<td>0.495</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>( \text{DU_TRADE} )</td>
<td>12,114</td>
<td>0.262</td>
<td>0.000</td>
<td>0.440</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>( \text{DU_SERVICES} )</td>
<td>12,114</td>
<td>0.260</td>
<td>0.000</td>
<td>0.438</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>( \text{DU_OTHER} )</td>
<td>12,114</td>
<td>0.052</td>
<td>0.000</td>
<td>0.222</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>( \text{DU_SOUTH} )</td>
<td>12,114</td>
<td>0.424</td>
<td>0.000</td>
<td>0.494</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>( \text{FULL} )</td>
<td>12,114</td>
<td>0.488</td>
<td>0.000</td>
<td>0.500</td>
<td>0.000</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Note(s): This table reports descriptive statistics of the variables included in the model. \( \Delta \text{NI} \) is the change in net income scaled by end-of-year total assets; \( \Delta \text{CF} \) is the change in operating cash flow scaled by end-of-year total assets; \( \text{ACC} \) is the difference between the net income (NI) and the operating cash flow (CF) scaled by end-of-year total assets; \( \text{SPOS} \) is a dummy variable which takes value 1 when the ratio between the net income and total asset is between 0 and 0.01; \( \text{SIZE} \) is the natural logarithm of total assets; \( \text{SALESGROWTH} \) is the change in Net Sales; \( \text{FINLEVERAGE} \) is the ratio between Total Debt (both short and long term) and Total Equity; \( \text{CF} \) is a simplified measure for operating cash flow scaled by end-of-year total assets; \( \text{AUDIT} \) is a dummy variable which takes value 1 if the companies is audited; \( \text{DU_MANUF} \) is a dummy variable which takes value 1 if the company operates in the manufacturing macro-sector; \( \text{DU_TRADE} \) is a dummy variable which takes value 1 if the company operates in the trade macro-sector; \( \text{DU_SERVICES} \) is a dummy variable which takes value 1 if the company operates in the services macro-sector; \( \text{DU_OTHER} \) is a dummy variable which takes value 1 if the company operates in the residual macro-sector; \( \text{DU_SOUTH} \) is a dummy variable which takes value 1 if the company is settled in Southern Italy; \( \text{FULL} \) is a dummy variable which takes value 1 if the company opted for the Full rules.

Source(s): Created by the author
<table>
<thead>
<tr>
<th>Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
<th>(11)</th>
<th>(12)</th>
<th>(13)</th>
<th>(14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) ΔNI</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) ΔCF</td>
<td>0.231*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) ACC</td>
<td>0.288*</td>
<td>0.120*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) SPOS/C0</td>
<td>−0.007</td>
<td>0.007</td>
<td>−0.005</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) SIZE</td>
<td>0.042*</td>
<td>0.021*</td>
<td>0.002</td>
<td>0.065*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(6) SALES GROWTH</td>
<td>0.156*</td>
<td>0.081*</td>
<td>0.000</td>
<td>−0.046*</td>
<td>0.055*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(7) FIN LEVERAGE</td>
<td>0.006</td>
<td>0.003</td>
<td>−0.001</td>
<td>0.035*</td>
<td>0.002</td>
<td>0.002</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(8) CF</td>
<td>0.170*</td>
<td>0.715*</td>
<td>0.165*</td>
<td>−0.097*</td>
<td>−0.053*</td>
<td>0.086*</td>
<td>−0.004</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(9) AUDIT</td>
<td>0.019*</td>
<td>0.002</td>
<td>−0.023*</td>
<td>−0.065*</td>
<td>0.332*</td>
<td>0.021*</td>
<td>−0.004</td>
<td>0.009</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(10) DU MANUF</td>
<td>0.002</td>
<td>0.001</td>
<td>0.000</td>
<td>0.013</td>
<td>0.001</td>
<td>−0.009</td>
<td>0.003</td>
<td>0.005</td>
<td>0.021*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(11) DU TRADE</td>
<td>−0.005</td>
<td>0.000</td>
<td>−0.014</td>
<td>−0.013</td>
<td>0.009</td>
<td>0.001</td>
<td>−0.003</td>
<td>−0.003</td>
<td>−0.021*</td>
<td>−0.510*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(12) DU SERVICES</td>
<td>0.000</td>
<td>0.001</td>
<td>0.007</td>
<td>0.006</td>
<td>−0.011</td>
<td>0.009</td>
<td>−0.001</td>
<td>0.002</td>
<td>−0.012</td>
<td>−0.513*</td>
<td>−0.353*</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(13) DU SOUTH</td>
<td>0.001</td>
<td>0.007</td>
<td>−0.013</td>
<td>0.046*</td>
<td>−0.107*</td>
<td>0.007</td>
<td>0.014</td>
<td>−0.038*</td>
<td>−0.009*</td>
<td>−0.012</td>
<td>−0.006</td>
<td>0.025*</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>(14) FULL</td>
<td>0.005</td>
<td>−0.005</td>
<td>0.017</td>
<td>−0.035*</td>
<td>0.019*</td>
<td>0.013</td>
<td>−0.018*</td>
<td>−0.009</td>
<td>0.0066*</td>
<td>−0.024*</td>
<td>−0.025*</td>
<td>0.039*</td>
<td>0.014</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**Note(s):** *p < 0.05

This table reports the pairwise Pearson correlation matrix for the variables included in the models. Significance levels: *p*-value < 5%.

ΔNI is the change in net income scaled by end-of-year total assets; ΔCF is the change in operating cash flow scaled by end-of-year total assets; ACC is the difference between the net income (NI) and the operating cash flow (CF) scaled by end-of-year total assets; SPOS is a dummy variable which takes value 1 when the ratio between the net income and total asset is between 0 and 0.01; SIZE is the natural logarithm of total assets; SALES GROWTH is the change in Net Sales; FIN LEVERAGE is the ratio between Total Debt (both short and long term) and Total Equity; CF is a simplified measure for operating cash flow scaled by end-of-year total assets; AUDIT is a dummy variable which takes value 1 if the companies is audited; DU MANUF is a dummy variable which takes value 1 if the company operates in the manufacturing macro-sector; DU TRADE is a dummy variable which takes value 1 if the company operates in the trade macro-sector; DU SERVICES is a dummy variable which takes value 1 if the company operates in the services macro-sector; DU SOUTH is a dummy variable which takes value 1 if the company is settled in Southern Italy; FULL is a dummy variable which takes value 1 if the company opted for the Full rules.

**Source(s):** Created by the author.
SALES GROWTH, CF, AUDIT and FULL. The last piece of evidence is particularly interesting, as it implies that audited firms and Full rules adopters are less inclined to manage earnings through SPOS. The presence of a significant correlation between the control variables may also be observed. For instance, AUDIT and SIZE are strongly correlated, while South-based companies are negatively related to SIZE and AUDIT. Finally, FULL and AUDIT are positively related, suggesting that Full rules adopters are more inclined to be audited.

5. Results and discussion
After defining the measures for earnings quality, H1 was first tested by comparing the variability of \( \Delta NI \), proxied by the residuals of Model 1 between the two groups. Despite the fact that the difference in earnings variability is low, the results of the \( F \)-test suggest that Full rules adopters show lower earnings variability with reference to the control group (\( p = 0.000 \)). Second, the variability of \( \Delta NI \) over \( \Delta CF \), measured by the standard deviation of the residuals of Model 1 divided by the standard deviation of the residuals of Model 2, was observed. The results do not support the presence of any significant difference in terms of the variability of \( \Delta NI \) over \( \Delta CF \) between the two groups. Third, the Spearman correlation between ACC and CF is measured. This result confirms the trend observed for \( \Delta NI \): Simplified rules adopters show less negative correlation between accruals and cash flows, suggesting higher earnings quality for this group.

The results of these tests are summarized in Table 3.

Finally, the results of Model 3 (Table 4) support the presence of a strong negative relation (0.01 level) between SPOS and the choice of the Full rules, implying that SPOS are less frequent for Full rules adopters. As for the control variables, it is possible to observe a strong positive effect of AUDIT on the probability to adopt the Full rules and a general lower propensity to adopt the Full rules in 2019 [12].

In brief, the empirical evidence of the present study confirms the impact of accounting rules’ choice on income smoothing behaviors (proxied by \( \Delta NI \) and the correlation between ACC and CF). However, the sign of the relation is opposite to the mentioned expectations, implying that there is a relevant number of “label adopters” among Full rules adopters. On the contrary, a negative relation (significant at the 0.01 level) between the presence of SPOS and the choice of the Full rules may be observed.

<table>
<thead>
<tr>
<th>Measures</th>
<th>Expected sign</th>
<th>Obs</th>
<th>SD (Sim)</th>
<th>SD (Full)</th>
<th>SD (Comb.)</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variability of ( \Delta NI )</td>
<td>+</td>
<td>12,114</td>
<td>0.029</td>
<td>0.026</td>
<td>0.028</td>
<td>0.000***</td>
</tr>
<tr>
<td>Variability of ( \Delta CF )</td>
<td>n.a</td>
<td>12,016</td>
<td>0.177</td>
<td>0.158</td>
<td>0.168</td>
<td>0.000***</td>
</tr>
<tr>
<td>Variability of ( \Delta NI ) over ( \Delta CF )</td>
<td>+</td>
<td>12,016</td>
<td>0.164</td>
<td>0.163</td>
<td>–</td>
<td>0.2728</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measures</th>
<th>Expected sign</th>
<th>Obs</th>
<th>Corr (Sim)</th>
<th>Corr (Full)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corr. between ACC and CF</td>
<td>+</td>
<td>12,114</td>
<td>–0.058***</td>
<td>–0.071***</td>
</tr>
</tbody>
</table>

**Note(s):** ***p < 0.01, **p < 0.05, *p < 0.1**

This table reports the result of the \( F \)-test and the Spearman Correlation for the two groups (Simplified vs Full rules adopters).

**Variability of \( \Delta NI \)** is the standard deviation of the residuals of a regression model for \( \Delta NI \); **Variability of \( \Delta CF \)** is the standard deviation of the residuals of a regression model for \( \Delta CF \); **Variability of \( \Delta NI \) over \( \Delta CF \)** is the standard deviation of the residuals of the Model predicting \( \Delta NI \) divided by the standard deviation of the residuals of the Model predicting \( \Delta CF \). **Corr. between ACC and CF** is the Spearman Correlation between the residuals of a regression model predicting ACC and the residuals of a regression model predicting CF.

**Source(s):** Created by the author.

Table 3. \( F \)-test \( \Delta NI \) and \( \Delta NI \) over \( \Delta CF \) and Spearman correlation between ACC and CF.
The counterintuitive relation between the choice of the Full rules and income smoothing behaviors implies that this choice does not entail a sharp increase in reporting quality. However, this result should be interpreted with caution for various reasons. First, as mentioned above, previous literature has suggested the presence of a complementary relation between a complex accounting regime and accounting quality. Nevertheless, since the choice of the Full rules is not related to any form of audit, companies have high discretion in applying such rules. This discretion may inevitably reduce the signaling power of the choice in terms of firms’ commitment to transparency in addressing external stakeholders, thus incentivizing the presence of “label” adopters. Second, despite the sampling process via PSM, the sample is not equally distributed in terms of geographic distribution. Indeed, the percentage of companies that opted for the Full rules is higher in Southern Italy (49.6%) vs Northern Italy (48.2%). Therefore, it is necessary to analyze the potential effect of different reporting environments to better interpret these results.

In order to test H2, the reporting environment was captured through the variable DU_SOUTH, which takes value 1 if the company is based in the South and 0 otherwise. To test the impact of the reporting environment on the relation between accounting choice and income smoothing behaviors, the sample was divided into two groups (North-based and South-based companies) and the possibility that the results of the empirical analyses for H1 would remain unchanged was verified.

The evidence resulting from the empirical analysis (Table 5) shows that, in a “cooperative” environment (such as Northern Italy), the relation between the choice of Full rules and income

<table>
<thead>
<tr>
<th>FULL</th>
<th>Coef</th>
<th>St.Err</th>
<th>t-value</th>
<th>p-value</th>
<th>[95% Conf Interval]</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPOS</td>
<td>-0.132</td>
<td>0.044</td>
<td>-3.01</td>
<td>0.003</td>
<td>-0.218</td>
<td>-0.046***</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.033</td>
<td>0.028</td>
<td>-1.21</td>
<td>0.226</td>
<td>-0.087</td>
<td>0.021</td>
</tr>
<tr>
<td>SALESgrowth</td>
<td>0.066</td>
<td>0.069</td>
<td>0.96</td>
<td>0.355</td>
<td>-0.068</td>
<td>0.201</td>
</tr>
<tr>
<td>FINLEVERAGE</td>
<td>-0.001</td>
<td>0.001</td>
<td>-0.87</td>
<td>0.383</td>
<td>-0.002</td>
<td>0.001</td>
</tr>
<tr>
<td>CF</td>
<td>-0.174</td>
<td>0.121</td>
<td>-1.44</td>
<td>0.151</td>
<td>-0.41</td>
<td>0.063</td>
</tr>
<tr>
<td>AUDIT</td>
<td>0.491</td>
<td>0.049</td>
<td>10.08</td>
<td>0.000</td>
<td>0.395</td>
<td>0.586***</td>
</tr>
<tr>
<td>DU_MANUF</td>
<td>-0.258</td>
<td>0.085</td>
<td>-3.03</td>
<td>0.002</td>
<td>-0.424</td>
<td>-0.091***</td>
</tr>
<tr>
<td>DU_TRADE</td>
<td>-0.278</td>
<td>0.088</td>
<td>-3.16</td>
<td>0.002</td>
<td>-0.45</td>
<td>-0.106***</td>
</tr>
<tr>
<td>DU_SERVICES</td>
<td>-0.06</td>
<td>0.088</td>
<td>-0.69</td>
<td>0.493</td>
<td>-0.233</td>
<td>0.112</td>
</tr>
<tr>
<td>Constant</td>
<td>0.386</td>
<td>0.215</td>
<td>1.79</td>
<td>0.073</td>
<td>-0.036</td>
<td>0.808 *</td>
</tr>
<tr>
<td>YEAR fixed effects</td>
<td>YES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note(s): ***p < 0.01, **p < 0.05, *p < 0.1

This table reports the results of a logistic regression model with robust standard errors regressing the probability to opt for the Full rules (FULL = 1) on SPOS; SPOS is a dummy variable which takes value 1 when the ratio between the net income and total asset is between 0 and 0.01; SIZE is the natural logarithm of total assets; SALESgrowth is the ratio between Total Debt (both short and long term) and Total Equity; CF is a simplified measure for operating cash flow scaled by end-of-year total assets; AUDIT is a dummy variable which takes value 1 if the companies is audited; DU_MANUF is a dummy variable which takes value 1 if the company operates in the manufacturing macro-sector; DU_TRADE is a dummy variable which takes value 1 if the company operates in the trade macro-sector; DU_SERVICES is a dummy variable which takes value 1 if the company operates in the services macro-sector. Year fixed effects are included in the model.
### Table 5. F-test $\Delta NI$ and $\Delta NI$ over $\Delta CF$ and Spearman correlation between ACC and CF (North and South)

<table>
<thead>
<tr>
<th>Measures</th>
<th>North</th>
<th>South</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exp sign</td>
<td>Obs</td>
</tr>
<tr>
<td>Variability of $\Delta NI$</td>
<td>+</td>
<td>6,980</td>
</tr>
<tr>
<td>Variability of $\Delta CF$</td>
<td>n.a</td>
<td>6,927</td>
</tr>
<tr>
<td>Variability of $\Delta NI$ over $\Delta CF$</td>
<td>+</td>
<td>6,927</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measures</th>
<th>Exp sign</th>
<th>Obs</th>
<th>Corr (Sim)</th>
<th>Corr (Full)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corr. between ACC and CF</td>
<td>+</td>
<td>6,980</td>
<td>-0.081***</td>
<td>-0.057***</td>
</tr>
</tbody>
</table>

**Note(s):** ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$**

This table reports the result of the F-test and the Spearman correlation for the two groups (Simplified vs Full rules adopters), focusing separately on North-based and South-based companies.

- **Variability of $\Delta NI$** is the standard deviation of the residuals of a regression model for $\Delta NI$.
- **Variability of $\Delta CF$** is the standard deviation of the residuals of a regression model for $\Delta CF$.
- **Variability of $\Delta NI$ over $\Delta CF$** is the standard deviation of the residuals of the Model predicting $\Delta NI$ divided by the standard deviation of the residuals of the Model predicting $\Delta CF$.
- **Corr. between ACC and CF** is the Spearman Correlation between the residuals of a regression model predicting ACC and the residuals of a regression model predicting CF.

**Source(s):** Created by the author.
smoothing behaviors is ambiguous. Indeed, this choice does not significantly impact on ΔNI (there is a small decrease significant at the 0.1 level when switching to the Full rules), while there is a negative impact on ΔNI over ΔCF. In contrast, in a “non-cooperative” environment (Southern Italy), Full rules adopters show a lower degree of variability of ΔNI, while the variability of ANI over ΔCF follows an opposite trend.

As for the correlation between ACC and CF, the results confirm the presented hypothesis: in Northern Italy, the choice of the Full rules is associated with a less negative correlation, the same choice determines an opposite effect in Southern Italy.

Finally, the results for Model 6, which includes the interaction term between the variables DU_SOUTH and FULL in order to further understand the impact of the regional environment on SPOS, are summarized in Table 6.

The empirical model supports the presence of the main effect between the two variables and the target variable (respectively \( p = 0.016 \) and \( p = 0.001 \)). In particular, the result for DU_SOUTH suggests that, \textit{ceteris paribus}, South-based companies are more prone to opt for the Full Rules. Meanwhile, the variable SPOS, which was already significant in Model 3, has reinforced its predictive power. The significance of the interaction term (0.05 level) is consistent with the expectations of the study. Indeed, this result confirms that Southern firms that disclose SPOS are more likely to opt for the Full rules. In brief, the results confirm the

### Table 6

<table>
<thead>
<tr>
<th>FULL</th>
<th>Coef</th>
<th>St.Err</th>
<th>t-value</th>
<th>p-value</th>
<th>[95% Conf Interval]</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE</td>
<td>-0.030</td>
<td>0.028</td>
<td>-1.10</td>
<td>0.271</td>
<td>-0.085</td>
<td>0.024</td>
</tr>
<tr>
<td>SALESGROWTH</td>
<td>0.066</td>
<td>0.069</td>
<td>0.96</td>
<td>0.339</td>
<td>-0.069</td>
<td>0.200</td>
</tr>
<tr>
<td>FINLEVERAGE</td>
<td>-0.001</td>
<td>0.001</td>
<td>-0.86</td>
<td>0.389</td>
<td>-0.002</td>
<td>0.001</td>
</tr>
<tr>
<td>CF</td>
<td>-0.165</td>
<td>0.121</td>
<td>-1.36</td>
<td>0.172</td>
<td>-0.402</td>
<td>0.072</td>
</tr>
<tr>
<td>AUDIT</td>
<td>0.497</td>
<td>0.049</td>
<td>10.16</td>
<td>0.000</td>
<td>0.401</td>
<td>0.593 ***</td>
</tr>
<tr>
<td>DU_MANUF</td>
<td>-0.258</td>
<td>0.085</td>
<td>-3.04</td>
<td>0.002</td>
<td>-0.425</td>
<td>-0.091 ***</td>
</tr>
<tr>
<td>DU_TRADE</td>
<td>-0.279</td>
<td>0.088</td>
<td>-3.17</td>
<td>0.002</td>
<td>-0.451</td>
<td>-0.106 ***</td>
</tr>
<tr>
<td>DU_SERVICES</td>
<td>-0.063</td>
<td>0.088</td>
<td>-0.72</td>
<td>0.472</td>
<td>-0.236</td>
<td>0.109</td>
</tr>
<tr>
<td>ST(DU_SOUTH)</td>
<td>0.045</td>
<td>0.019</td>
<td>2.40</td>
<td>0.016</td>
<td>0.008</td>
<td>0.081 **</td>
</tr>
<tr>
<td>ST(SPOS)</td>
<td>-0.060</td>
<td>0.019</td>
<td>-3.23</td>
<td>0.001</td>
<td>-0.097</td>
<td>-0.024 ***</td>
</tr>
<tr>
<td>SOUTH*SPOS</td>
<td>0.039</td>
<td>0.018</td>
<td>2.15</td>
<td>0.032</td>
<td>0.003</td>
<td>0.075 **</td>
</tr>
<tr>
<td>Constant</td>
<td>0.331</td>
<td>0.217</td>
<td>1.53</td>
<td>0.126</td>
<td>-0.094</td>
<td>0.756</td>
</tr>
</tbody>
</table>

Mean dependent var 0.488
Pseudo r-squared 0.011
Chi-square 176.245
Akaike crit. (AIC) 16,627.200
Bayesian crit. (BIC) 16,730.830

\( \text{Note(s):} **p < 0.01, *p < 0.05, *p < 0.1} \)

This table reports the results of a logistic regression model with robust standard errors regressing the probability to opt for the Full rules (FULL = 1) on the interaction term between DU_SOUTH and SPOS SIZE is the natural logarithm of total assets; SALESGROWTH is the change in Net Sales; FINLEVERAGE is the ratio between Total Debt (both short and long term) and Total Equity; CF is a simplified measure for operating cash flow scaled by end-of-year total assets; AUDIT is a dummy variable which takes value 1 if the companies is audited; DU_MANUF is a dummy variable which takes value 1 if the company operates in the manufacturing macro-sector; DU_TRADE is a dummy variable which takes value 1 if the company operates in the trade macro-sector; DU_SERVICES is a dummy variable which takes value 1 if the company operates in the services macro-sector; ST(DU_SOUTH) is the standardized dummy variable which takes value 1 if the company is settled in Southern Italy; ST(SPOS) is the standardized dummy variable which takes value 1 when the ratio between the net income and total asset is between 0 and 0.01; SOUTH*SPOS is the interaction term between ST(DU_SOUTH) and ST(SPOS). Year fixed effects are included in the model.

\( \text{Source(s):} \) Created by the author
impact of the reporting environment on the relation between the choice of the Full rules and earnings quality.

The negative relation between the choice of the Full rules and earnings quality is confirmed for firms set in a “non-cooperative” social environment, implying the presence of “label” adopters. Indeed, three classic income smoothing proxies (ΔNI, correlation between ACC and CF and SPOS) suggest that Full rules adopters disclose less earnings quality in this context. Instead, for firms set in a “cooperative” social environment, despite the ambiguous result, the empirical analyses support a higher presence of “serious” adopters. Indeed, a lower frequency of SPOS and less negative correlation between ACC and CF are observed for Full rules adopters.

Finally, it must be noted that the results for ΔNI over ΔCF apparently confute the findings of the present study. However, since the measure for ΔCF is not accurate, the results may be influenced by some measurement errors and, consequently, should be interpreted with caution. Thus, H2 is partially supported.

6. Robustness check
Since the sample is sharply divided among North- and South-based companies, separate regression could be useful in order to disentangle potential confounding effects in Model 4. Indeed, as supported by the results reported in Table 6, ceteris paribus, South-based companies are more willing to opt for Full rules (0.05 level) and disclose SPOS (0.05 level). Northern companies, complementarily, are less willing to opt for Full rules and to disclose SPOS. At the same time, SPOS are negatively related to the choice of the Full rules (Table 4).

For this reason, the empirical analysis presented above was replicated performing separate regressions for each group (Group 1: Du_South = 0 vs Group 2: Du_South = 1).

The results are summarized in Table 7. They suggest that there is a strong negative relation (p < 0.05) between the choice of the Full rules and SPOS for North-based companies, while the same choice is not significantly related with the target variable for South-based companies.

This evidence implies that while the choice of the Full rules does not impact the probability to disclose SPOS in a “non-cooperative” social environment, the same choice could have a relevant impact in a “cooperative” social environment.

7. Conclusions
In a context where financial statements are public, the choice between alternative reporting regimes constitutes a signal toward external stakeholders. In general, the voluntary choice of more complex and expensive regimes should act as a signal of firms’ transparency and commitment to publishing high-quality financial disclosure. However, in the absence of any form of audit, companies can be incentivized to take advantage of the reputational benefits related to the choice without bearing the related costs. In the former case (“serious adopters”), the choice of the Full rules acts as a complement of firms’ commitment to increase earnings quality. In the latter one (“label adopters”), the choice acts as a substitute of lower earnings quality.

Drawing on the literature concerning the relation between accounting choices and earnings quality (Francis et al., 2008a; Cifci, 2010; Blanco et al., 2014) and financial reporting quality in private firms (among others Beuselinck et al., 2021), the study investigated whether the same conclusions may be confirmed for SMEs that face the option between Full and Simplified rules.

Using a sample of 4,054 Italian companies and 12,114 firm-year observations, four earnings quality proxies (ΔNI, ΔNI over ΔCF, correlation between ACC and CF and SPOS)
were compared between the group of companies that voluntarily opted for the Full rules and a sub-sample of the larger population of companies that used the Simplified rules in the course of the observation period.

The results for H1 (*There is a positive relationship between the choice of the Full rules and earnings quality*) are ambiguous: they show a positive relationship between the choice of the Full rules and income smoothing behaviors. In contrast, the same choice appears to reduce the probability to disclose SPOS.

The results of the study suggest that the choice of the Full rules acts as a substitute for income smoothing behaviors, while it is complementary to the choice to disclose SPOS. The first finding could be motivated by private companies’ willingness to disguise lower earnings quality with the signaling power of the more complex regime (Cameran et al., 2014). The second finding could be motivated by the greater size of Full rules adopters that are less inclined to disclose small earnings. Indeed, in line with previous literature (Bassemir and Novotny-Farkas, 2018), these companies tend to disclose larger profits and losses.

The reason for this opportunistic behavior was further investigated by analyzing the impact of the social environment on the relation between the choice of the Full rules and earnings quality. Since Italy is characterized by a strict dichotomy between North and South, which is reflected in stakeholders’ approach to collective action, it was hypothesized that opportunistic behaviors should be less frequent in a “cooperative” environment (North-located companies), which is characterized by stronger institutions. On the contrary, an opposite relation is expected in a “non-cooperative” environment (South-located companies), where social ties are dominated by mutual distrust, institutions are weaker, and the signal related to the choice of the Full rules is much stronger.

<table>
<thead>
<tr>
<th></th>
<th>NORTH (Du_South = 0)</th>
<th>SOUTH (Du_South = 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coef</td>
<td>p-value</td>
</tr>
<tr>
<td>SPOS</td>
<td>-0.202***</td>
<td>0.001</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.029</td>
<td>0.446</td>
</tr>
<tr>
<td>SALES GROWTH</td>
<td>-0.016</td>
<td>0.862</td>
</tr>
<tr>
<td>FIN LEVERAGE</td>
<td>-0.002</td>
<td>0.244</td>
</tr>
<tr>
<td>CF</td>
<td>-0.127</td>
<td>0.446</td>
</tr>
<tr>
<td>AUDIT</td>
<td>0.671***</td>
<td>0.000</td>
</tr>
<tr>
<td>DU_MANUF</td>
<td>-0.319***</td>
<td>0.004</td>
</tr>
<tr>
<td>DU_TRADE</td>
<td>-0.259***</td>
<td>0.024</td>
</tr>
<tr>
<td>DU_SERVICES</td>
<td>-0.083</td>
<td>0.470</td>
</tr>
<tr>
<td>Constant</td>
<td>0.322</td>
<td>0.276</td>
</tr>
<tr>
<td>YEAR fixed effects</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Observations</td>
<td>6,980</td>
<td>5,134</td>
</tr>
<tr>
<td>Pseudo r-squared</td>
<td>0.019</td>
<td>0.005</td>
</tr>
</tbody>
</table>

**Note(s):*** ***p < 0.01, **p < 0.05, *p < 0.1

This table reports the results of a logistic regression model with robust standard errors regressing the probability to opt for the Full rules (FULL = 1) on SPOS, focusing separately on North-based and South-based companies.

SPOS is a dummy variable which takes value 1 when the ratio between the net income and total asset is between 0 and 0.01; SIZE is the natural logarithm of total assets; SALES GROWTH is the change in Net Sales; FIN LEVERAGE is the ratio between Total Debt (both short and long term) and Total Equity; CF is a simplified measure for operating cash flow scaled by end-of-year total assets; AUDIT is a dummy variable which takes value 1 if the company is audited; DU_MANUF is a dummy variable which takes value 1 if the company operates in the manufacturing macro-sector; DU_TRADE is a dummy variable which takes value 1 if the company operates in the trade macro-sector; DU_SERVICES is a dummy variable which takes value 1 if the company operates in the services macro-sector. Year fixed effects are included in the model.

**Source(s):** Created by the author.
The results for H2 (The relation between the choice of the Full rules and earnings quality differs between companies located in a “cooperative” environment and those in a “non-cooperative” environment) confirm the impact of the reporting environment on the relation between the choice of the Full rules and earnings quality.

Opportunistic behaviors are more frequent in firms set in a “non-cooperative” social environment, thus implying the widespread presence of “label” adopters. Indeed, three out of four of the analyzed proxies are coherent in suggesting the reduction of earnings quality for the companies which opted for the Full rules. Instead, it was observed that firms set in a “cooperative” social environment display less income smoothing behaviors (proxied by the correlation between ACC and CF) and a strong negative impact on the probability to observe SPOS. Even if the results do not confirm a sharp increase in earnings quality, it is reasonable to presume a higher presence of “serious” adopters, compared to the first group.

In brief, the results of the study suggest that the signaling power of accounting rules’ choice for SMEs could lead to wrong conclusions. The choice is not related per se to an increase in earnings quality; rather this relation appears to be influenced by the social environment.

This evidence could have several implications.

First, the presence of a high degree of heterogeneity in accounting quality within private firms has been confirmed. This is a significant addition to the literature that addresses financial reporting quality in private firms by suggesting that SMEs cannot be considered as a homogenous group, and that the reporting environment could be helpful to explain such heterogeneity.

Second, the results could be helpful for the users of accounting information disclosed by SMEs. Indeed, users may be misled by certain disclosure choices (such as the choice of the Full rules) that are not related to any relevant improvement in earnings quality, thus reinforcing the results of DeZoort et al. (2017). The findings of the present study clarify that the choice of the Full rules is not directly linked to earnings quality and help users in detecting “label adopters” behaviors.

Third, the results have an immediate policy implication. Indeed, since the increased complexity of the Full rules gives room to opportunistic behaviors, the possibility to opt for this regime should entail some form of audit. This could disincentivize the presence of “label adopters”.

Due to several limitations, the results of the present study should be interpreted with caution. First, since the study involves firms that publish simplified financial statements, income smoothing proxies were measured using some simplified data that could distort the results. Second, it was hypothesized that Full rules adopters should have higher earnings quality and relative measures between the target and the control group were observed. However, it is not possible to claim if that one group publishes high-quality financial statements as a stand-alone. Third, considering that the sample represents only the Italian context, comparative studies including other countries could reinforce the strength of the results. Forth, the reporting environment was proxied starting from the geographical dichotomy between North and South of Italy. However, regional characteristics may not be perfectly mimicked by the firms operating in these regions. Accordingly, the results should be intended as preliminary evidence of the impact of the reporting environment on the relation between accounting choice and earnings quality. Further research could overcome these issues by comparing different countries and observing different reporting environments within those countries. Moreover, future studies could relax the assumption linking regional characteristics and firms’ behavior by drawing on the personal characteristics of their managers (e.g. culture, education) and trade relations rather than on geographical location.
Notes

1. The Italian system also provides a set of ultra-simplified rules for micro entities (art. 2435 ter) that is available for companies respecting the following dimensional thresholds: Total assets: below €175,000; Total revenues: below €350,000; and Number of employees: below 5. Given the very limited economic relevance of these entities, they are excluded from the present study.

2. The fiscal law does not offer any direct tax advantage based on the adoption of the Simplified rules.

3. For instance, Simplified rules adopters are not required to share any information about derivatives (and their fair value), capitalized costs, impairment tests of PP&E and intangible assets, financial leases, provisions and deferred tax assets.

4. As stated in note 2, no explicit fiscal incentives are related with the Simplified rules. However, some implicit fiscal incentives, related to income smoothing behaviors, could foster opportunistic choices.

5. In the absence of legal constraints, the choice of the Full rules is potentially reversible at the end of each accounting period.

6. The Italian Simplified regime is characterized by its exemption from the drawing up of the Cash-Flow Statement and the Management Report, the reduced compulsory information in the Notes, and, above all, different measurement criteria for receivables, debts, and short-term securities.

7. For the purposes of the present study, the NORTH include all the companies located in the Aosta Valley, Piedmont, Lombardy, Trentino Alto Adige, Veneto, Friuli-Venezia Giulia, Liguria, Emilia Romagna, Tuscany and the Marches regions. The remaining regions (Lazio, Umbria, Abruzzo, Campania, Molise, Basilicata, Calabria, Apulia, Sicily and Sardinia) are classified as SOUTH.

8. The Simplified balance sheet does not provide information about the classification of debt between financial and non-financial. For this reason, it is not possible to apply DeFond and Park’s (2001) simplified measure of discretionary accruals.

9. \[ CF = \text{Gross operating income} \times (1 - \text{company tax rate}) + \text{Amortization and Depreciation costs} + \text{Other non-monetary costs (provisions)} - D \text{Account receivables} - D \text{Inventories} - D \text{Other current assets} + D \text{Account payables} + D \text{Other current liabilities}. \]

In order to have a consistent measure between Simplified rules adopters and Full rules adopters, the simplified measure is also used for Full adopters. This should prevent measurement biases between the two groups.

10. Three following main macro-sectors of activities are thus identified: Manufacturing, Trade and Services. As these macro-sectors account for 95% of sampled companies, the remaining 5% is classified in a residual “other” macro-sector that will be treated as a reference industry in the subsequent analyses.

11. Following Bassemir and Novotny-Farkas (2018), a reverse model specification with SPOS as dependent variable and FULL between independent variables is built. All the results remain unchanged.

12. This result may be explained by the outbreak of the COVID-19 pandemic, starting from February 2020, which probably impacted on 2019 financial statements’ preparation.

References


**Differential reporting and earnings quality**

Corresponding author
Mario Daniele can be contacted at: mario.daniele@unicatt.it