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DISCRETIONARY ACCRUALS VERSUS REAL ACTIONS: HOW INSTITUTIONAL QUALITY SHAPES TAX AVOIDANCE IN SOUTHERN EUROPE

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Abstract: This study seeks to clarify the relationship between discretionary accruals, real Earning management (EM), and tax avoidance (TA) in Southern Europe while also examining the moderating role of institutional quality (INSTQ). Using a dataset consisting of 561 non-financial publicly listed firms from Portugal, Italy, Greece, and Spain during 2018–2024, the study applies firm fixed-effects models and uses three tax outcomes: CETR, GAAP ETR, and BTD. The results show a positive association between discretionary accruals and effective tax rates as well as book-tax differences, indicating that accrual-based manipulation increases reported taxable income and widens the gap between accounting and tax figures rather than reducing tax liabilities. By contrast, real EM shows a negative association with effective tax rates, suggesting that operational adjustments serve as a more direct channel for TA. INSTQ, measured through World Bank governance indicators, weakens the effects of both accrual-based and real-based TA, with stronger institutions limiting the tax benefits linked to managerial discretion. Country-level analyses reveal substantial variation across the four jurisdictions, highlighting differences in enforcement practices, book-tax conformity, and governance systems. Overall, the results confirm that the relationship between EM and TA depends on both the type of manipulation and the institutional context.

Keywords: EM; TA; Discretionary accruals; Real EM; Institutional quality; Book–tax differences; Southern Europe.

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1. Introduction

Corporate TA and EM were viewed as an area of tension for financial reporting, regulation, and public policy. In Europe, this natural connection between these elements has mandated continuous reforms related to the OECD/G20 Base Erosion and Profit Shifting program, the EU Anti-TA Directives, and the mandatory disclosure of cross-border tax arrangements under DAC6.

Accordingly, companies' reports become closely watched when declaring their earnings, tax positions, and use managerial discretion within the limits of accounting and tax rules. In this context, Southern Europe, represented by Portugal, Italy, Greece, and Spain, can set the stage for a proper analysis due to their closely shared civil-law and bank-based characteristics, with some differences in terms of their monitoring capacity, book-tax conformity, ownership structures, and INSTQ.

EM (EM) can be applied under two main mechanisms. The first is discretionary accruals (DA), where managers use available accounting choices and estimates in order to steer reported performance, but with no direct change to the real business activities. On the other hand, real EM is practiced when managers change their operational decisions (e.g., production, pricing, discretionary expenses, sales timing, or cash-flow-related activities) in order to sway earnings and even tax outcomes. These two mechanisms should not be considered equivalent and are distinct by the way in which managerial discretion affects tax burdens and book-tax differences.

A parallel concept with EM is TA (TA), which is viewed as a legal measure that minimizes tax burden. In prior research, TA is commonly assessed by the effective tax rates (e.g., cash ETR and GAAP ETR, and through book-tax differences).In spite of this, these measures cannot fully isolate the phenomenon due to their inherent constraints.

In one sense, ETR signifies the real or accounting tax burden that is connected with the pre-tax income. This implies that higher ETRs can suggest a higher tax burden and less tax reduction. Contrary to this, book-tax differences mirror the gap between accounting income and taxable income with signs of accounting discretion, tax planning, timing differences, or institutional rules when these gaps are greater. Given this, the current paper treats CETR, GAAP ETR, and BTD as associated but different tax outcomes without assuming that all of them are in tandem as a unified form of TA.

The aforementioned problem has both theoretical and empirical dimensions. Previous studies lack a general consensus regarding the relationships between EM and tax outcomes. One stream of thought argues that higher discretionary accruals are associated with higher effective tax rates, which lead to an increase in reported tax burdens rather than reducing them under accrual-based manipulation. Other

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streams suggest that EM supports tax planning and/or increases the gap between book income and taxable income. This connection becomes more difficult to interpret. REM is considered as operational decisions become less visible than accrual choices and begin to interact with enforcement strength, sectoral characteristics, and institutional monitoring. This heterogeneity suggests that the relationship between EM and tax outcomes relies on the way managers and the institutional environment operate.

Accordingly, INSTQ is a major factor to be considered. For example, stronger institutions that follow the rule of law, regulatory quality, and control of corruption have an increased expected cost of opportunistic reporting and aggressive tax behavior. In contrast, weaker institutional environments are more exposed to managerial discretion, especially when book-tax conformity allows financial reporting choices to affect taxable income. This argument is also consistent with Borlea et al. (2017), who show that corruption and the shadow economy are closely connected in European Union countries, suggesting that weaker institutional environments can create conditions for informal or opportunistic economic behavior. On this basis, the moderating role of INSTQ is important for understanding whether EM contributes to lower tax burdens, larger book-tax differences, or higher reported tax costs.

Hence, this research tackles these questions by separating EM into discretionary accruals and real EM and explicitly modelling the role of INSTQ in Southern Europe during 2018–2024. To achieve this, we set a sample encompassing 561 non-financial listed firms from Portugal, Italy, Greece, and Spain, including 3,927 firm-year observations. Firm-level accounting and tax data are obtained from Refinitiv, and the country-year INSTQ was measured using the World Bank Worldwide Governance Indicators.

The paper aims to contribute to prior research across four dimensions. First, we separate accrual-based and REM to show how each route suggests different implications for tax burdens and book-tax gaps. Second, we introduce INSTQ as a moderating variable to examine how governance shapes the tax under managerial discretion. Third, we use a range of tax outcomes to reduce proxy-specific interpretation and to distinguish between cash tax burden, accounting tax burden, and book-tax differences. Finally, we provide evidence-based results for the four Southern European countries that share broad legal and economic systems.

2. Literature review

Corporate TA and EM are two associated practices that stem from the discretion available to managers in financial reporting and tax planning. Without doubt,

agency theory provides a solid conceptual framework for interpreting this relationship. For example, managers engage in accounting choices or/and/or real business decisions to attempt to achieve their best interest (e.g., protect compensation, meet market expectations, or reduce political and regulatory pressures) (Mahmudi & Said, 2023). Where managerial incentives are misaligned with stakeholders' interests, the likelihood increases that accounting discretion will be used to shape a favorable representation of firm performance. Specifically speaking, a link between compensation agreements or career concerns with short-term performance can create the sort of pressure that motivates managers to plan on how to report earnings in a way that serves their interests (Karjalainen et al., 2023). Concurrently, planning the tax can also be utilized to reduce reported tax payments, secure cash flows, or improve short-term financial flexibility. In fact, Sirot (2024) argued that this phenomenon grows substantially during financial stress. Therefore, EM and tax planning can both be viewed as outcomes of managerial discretion under poor monitoring and information asymmetry.

Another theoretical perspective that helps explain this practice is the Positive Accounting Theory. It supports this view by providing an explanation for how managers choose accounting policies triggered by contractual, political, and market pressures.

In this regard, when firms are exposed to debt covenants, compensation contracts, investor expectations, or regulatory scrutiny, they tend to have a stronger motivation to manage their earnings. In addition, high-profile firms are also susceptible to higher political costs, and their reaction can be shaped by practicing income smoothing or more conservative tax planning to decrease the probability of intervention (Watts & Zimmerman, 1986). Despite this, EM does not always produce consistent tax-related outcomes. For instance, an Increased reported accounting income will improve the firm's appearance in capital markets. Yet, it will also lead to an increase in the taxable income when book income and taxable income are closely aligned. Alternatively, a lower taxable income will reduce taxation levels and create visible book-tax differences that increase the probability of scrutiny by tax authorities and other related stakeholders. This gives rise to a natural trade-off between EM and tax outcomes that depend on the accounting-tax system and the institutional environment (Floropoulos et al., 2024; Mendoza et al., 2022).

Beyond the theoretical perspective, empirical evidence suggests that EM is commonly divided into accrual-based EM and real EM. Discretionary accruals occur when managers use the accounting estimates and reporting choices to alter earnings without producing observable changes in the underlying operating activities. This creative accounting technique includes adjustments related to

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provisions, receivables, depreciation, or other accrual components. In comparison, Real EM incorporates alterations in actual business decisions (e.g., production, sales timing, pricing policies, discretionary expenses, and cash-flow-related decisions) (Roychowdhury, 2006). While both practices can influence reported earnings, accrual-based manipulation is visible to auditors and regulators because it is evident in accounting adjustments. On the other hand, real EM is harder to identify because it appears as operational behavior and imposes greater long-term costs since it distorts investment, production, and operating efficiency. Hence, accrual-based EM and real EM differ in their economic consequences and detectability.

Shifting to the concept of TA, it is generally defined as the use of legal tax planning methods to reduce reported tax payments. Before discussing TA, it is important to note that the literature draws a clear conceptual distinction between TA and tax evasion. On the one hand, tax evasion refers to the violation of tax laws, while TA operates within the boundaries of the law despite the ethical, regulatory, and reputational concerns (Dyreng et al., 2019; Hanlon & Heitzman, 2010; Slemrod, 2004). TA is commonly condemned because it reduces public revenues, shifts the tax burden, and exposes companies to reputational risk (Duhoon & Singh, 2023; Fisher, 2014; Lietz, 2013). Within the empirical literature, TA is typically evaluated using ETRs and book-tax differences.

Cash ETR portrays the cash taxes paid corresponding to pre-tax income. At the same time, GAAP ETR captures the total tax expense associated with pre-tax income. Consequently, lower ETRs are associated with lower tax liabilities and, therefore, greater tax savings. Moreover, Book-tax differences capture the gap between accounting income and taxable income. Due to this, a wider book-tax gap denotes tax planning, EM, timing differences, or differences between financial reporting rules and tax rules (Cappellesso & Rodrigues, 2019; Velte, 2023). Thus, the relation between discretionary accruals and tax outcomes is conceptually problematic.

On one hand, managers utilize accruals to increase book income while keeping taxable income lower, which would widen book-tax differences and may indicate tax planning. On the other hand, in countries with stronger book-tax conformity, upward accrual-based EM may increase both accounting income and taxable income, which may result in higher ETRs and lower TA. Prior studies provide mixed evidence on this issue. Mendoza et al. (2022) argue that discretionary accruals exhibit a positive relationship with ETRs in prominent European economies, pointing to the fact that accrual-based EM can lead to an increase in tax burdens rather than minimize them. Nevertheless, other studies report that EM and

TA work in tandem when managers are able to increase book income while reducing taxable income (Cappellesso & Rodrigues, 2019; Frank et al., 2009). These mixed results show that discretionary accruals do not exhibit a uniform tax effect across countries and institutional settings.

Finally, book-tax conformity represents a key factor explaining the inconsistent findings reported in prior literature. The argument is that when financial accounting rules and tax rules are closely connected, the managers can have less room to increase accounting income without affecting taxable income. In such contexts, aggressive earnings enhancement can lead to higher reported tax burdens. In contrast, lower book-tax conformity may provide more flexibility to managers to report higher accounting income to shareholders, while reporting lower taxable income to tax authorities. This creates a more substantial book-tax gap that allows EM and TA to occur simultaneously (Frank et al., 2009; Shackelford & Shevlin, 2001). Given this, a similar increase in discretionary accruals can indicate a higher tax burden under one setting and a higher TA in another. This is highly relevant in Southern Europe as Portugal, Italy, Greece, and Spain share civil-law characteristics but differ in enforcement capacity, book-tax conformity, ownership concentration, and INSTQ (Pereira et al., 2023; Sousa et al., 2025).

Turning to the other type of EM, real EM may have a different relationship with tax outcomes. In light of how real EM operates through actual business activities, the severe effect is mostly on revenues, costs, cash flows, and taxable income when compared to accrual-based accounting.

Under real EM, managers have the ability to accelerate sales, reduce discretionary expenses, alter production levels, or change operating decisions through mechanisms that influence both accounting earnings and taxable income (Roychowdhury, 2006). As a result, detecting such activities is more challenging than accounting for accruals by external monitors due to the unclear separation of these activities from normal business decisions. Hence, environments with weak governance structures make real EM a more attractive channel for reducing effective tax burdens. Despite this, real EM can damage long-term firm value if it leads to inefficient production, reduced investment, or distorted operating choices.

The accumulated empirical findings on real EM and tax outcomes are still scarce compared to the evidence on discretionary accruals. A strand of literature suggests that real EM and TA may jointly occur when managers use operational decisions to reduce taxable income or shift income across periods (Abu et al., 2024). Other studies provide evidence that real EM may function as an alternative to accrual-based manipulation when accrual choices become more visible or constrained by auditors and regulators (Floropoulos et al., 2024). This substitution mechanism is important in contexts where stronger enforcement reduces the usefulness of accrual

manipulation but does not fully prevent operational discretion. Therefore, it is necessary to examine discretionary accruals and real EM separately rather than treating EM as one general construct.

The final contribution of this study concerns the potential moderating role of INSTQ in the relationship between EM and tax outcome. Prior findings suggest that strong institutions can increase the expected cost of opportunistic reporting and aggressive tax behavior. In fact, the improved monitoring and the strong enforcement can reduce managers' ability to exploit gaps between accounting and tax systems and vice versa (Leuz et al., 2003; Magerakis, 2024). Thus, INSTQ determines whether managerial discretion leads to lower tax burdens, higher tax burdens, or wider book-tax differences.

To this end, the four countries examined in this study share several legal and economic features, with some differences in the strength of governance and enforcement. Their civil-law traditions and bank-based systems can create closer links between accounting income and taxable income. At the same time, their differences in regulatory quality and corruption control may influence the extent to which firms can use discretion for tax-related purposes. Prior evidence from Southern European settings shows that tax incentives, leverage, deferred tax items, family ownership, and governance characteristics affect EM and tax planning behavior (Chytis et al., 2019; Kolias & Koumanakos, 2022; Marques et al., 2011; Pereira et al., 2023; Sousa et al., 2025). These differences make the region an appropriate setting for examining how INSTQ moderates the relationship between discretionary accruals, real EM, and tax outcomes.

Viewed as a whole, the literature suggests that EM and TA are closely related, and the strength of this relationship depends on the type of EM and the institutional setting. On one hand, discretionary accruals can increase ETRs when they raise taxable income, but they can also widen book-tax differences when accounting income diverges from taxable income. Real EM exhibits a stronger relationship with lower ETRs because it affects operational activities and cash-generating processes. In addition, higher INSTQ may modify these relationships through enhanced enforcement and tighter monitoring of managerial behavior. Accordingly, the study formulates the following hypotheses:

H1: Discretionary accruals are significantly associated with tax outcomes in Southern European listed firms.

H2: Real EM is significantly associated with tax outcomes in Southern European listed firms.

H3: Institutional quality moderates the relationship between discretionary accruals and tax outcomes.

H4: Institutional quality moderates the relationship between real EM and tax outcomes.

3. Methodology and empirical data

The current study employs a quantitative panel data design to examine the effects of discretionary accruals and real EM on tax outcomes in Southern Europe. It also investigates whether INSTQ moderates these relationships. The analysis focuses on four Southern European economies: Portugal, Italy, Greece, and Spain. The study period covers 2018 to 2024, during which the EU Anti TA Directives, the OECD/G20 BEPS package, and the EU DAC6 disclosure regime were in effect.

The final sample includes 561 non-financial listed firms and up to 3,927 firm-year observations across seven years. The sample consists of 36 firms from Portugal, 320 from Italy, 110 from Greece, and 95 from Spain. Financial institutions are excluded because they operate under different accounting rules, regulatory requirements, and capital structures. Firm-level accounting and tax data are obtained from ORBIS by Bureau van Dijk and Refinitiv Eikon, while country-level institutional indicators are collected from the World Bank Worldwide Governance Indicators.

Tax outcomes are operationalized using three conventional proxies. Cash effective tax rate is measured as cash taxes paid divided by pre-tax income. The GAAP effective tax rate is calculated as total tax expense divided by pre-tax income. Firm-year observations with non-positive pre-tax income are excluded from ETR computations. All ETR measures are bounded between zero and one, and all continuous variables are winsorized at the 1st and 99th percentiles. Book tax differences are measured as pre-tax book income minus estimated taxable income divided by total assets. The estimated taxable income is calculated as current tax expense divided by the statutory corporate tax rate. A positive BTD indicates that book income exceeds taxable income and can therefore reflect accounting tax divergence and potential tax planning. Since discretionary accruals can increase reported accounting income without a proportional increase in taxable income, BTD can widen even when effective tax rates increase. These proxies capture different dimensions of tax outcomes and reduce the risk of relying on a single proxy-specific interpretation.

The main independent variables capture two EM channels. Discretionary accruals are estimated using the Modified Jones Model, which separates abnormal accruals from normal working capital adjustments. Real EM is measured following Roychowdhury and captures abnormal deviations in operating cash flows, discretionary expenses, and production costs. Abnormal cash flows and discretionary expenses are multiplied by negative one so that higher values

consistently indicate greater manipulation. The standardized components are then aggregated into a single REM index. Estimation is conducted cross-sectionally by year across the full sample. All variables are scaled by lagged total assets, and the resulting DA and REM measures are winsorized at the 1st and 99th percentiles. The results are also robust to a performance-matched specification.

INSTQ is measured using three dimensions from the World Bank Worldwide Governance Indicators: regulatory quality, rule of law, and control of corruption. Each indicator is standardized annually using z scores and then averaged into a composite INSTQ index. Higher values indicate stronger governance and enforcement quality. The measure varies across countries and years, but remains constant across firms within the same country and year. Additional robustness checks are conducted using a one-year lagged INSTQ measure.

Several firm-level control variables are included in the analysis. Firm size is measured as the natural logarithm of total assets. Leverage is calculated as total debt divided by total assets. Profitability is measured using return on assets. Capital intensity is proxied by property, plant, and equipment divided by total assets. A loss dummy equals one when pre-tax income is negative.

The empirical analysis proceeds in two stages. First, fixed effects panel regressions are estimated using the pooled sample to test hypotheses H1 to H4. Second, country-specific regressions are estimated for Portugal, Italy, Greece, and Spain to examine cross-country heterogeneity in the relationship between EM and tax outcomes. All continuous variables are winsorized at the 1st and 99th percentiles to limit the influence of outliers. This empirical design enables the study to capture both regional patterns and country-specific institutional characteristics within Southern Europe.

The baseline specification estimates the relationship between EM, INSTQ, and TA as follows:

Model 1: Baseline Pooled Model

$$TOit=\alpha+\beta1DAit+\beta2REMit+\gamma Controlsit+\mu i+\lambda t+\epsilon it \quad (1)$$

where: *TOit = tax outcome, represented by CETR, GAAP ETR, or BTD, for firm i in year t., DAit = discretionary accruals for firm iii in year t., REMit = real EM index for firm iii in year t., Controlsit = vector of firm-level controls., μi= firm fixed effects., λ t = year fixed effects., ϵit = error term.*

Model 2: INSTQ Moderation

$$TOit=\alpha+\beta1DAit+\beta2REMit+\beta3INSTQct+\beta4(DAit\times INSTQct)+\beta5(REMit\times INSTQct)+\gamma Controlsit+\mu i+\lambda t+\epsilon it \quad (2)$$

where: *INSTQ ct = institutional quality in country c for year t (composite WGI index), (DA it ×INSTQ ct) = interaction term, (REM it ×INSTQ ct) = interaction term.*

Model 3: Country-Specific Regressions

$$TOit=\alpha+\beta1DAit+\beta2REMit+\gamma Controlsit+\mu i+\lambda t+\epsilon it, \quad (3)$$

where: *estimated separately for c∈{Portugal,Italy,Greece,Spain}*
To clarify the empirical strategy and to link the hypotheses directly to the models, Table 1 summarizes the mapping between hypotheses, econometric specifications, and their associated data sources. Models 1 and 2 are designed to test H1–H4 at the regional level, while Model 3 captures cross-country heterogeneity by estimating the baseline specification separately.

Table 1. Hypotheses–Model Mapping

Hypothesis	Model	Key Variables/Interactions	Data Source
H1	Model 1 (Baseline Pooled)	β1DAit	ORBIS / Refinitiv Eikon (firm-level financials & tax data)
H2	Model 1 (Baseline Pooled)	β2REMit	ORBIS / Refinitiv Eikon (firm-level cash flows, expenses, production costs)
H3	Model 2 (Moderation)	(DAit×INSTQct)	World Bank WGI (rule of law, regulatory quality, control of corruption)
H4	Model 2 (Moderation)	(REMit×INSTQct)	World Bank WGI (rule of law, regulatory quality, control of corruption)

Table 2 reports the descriptive statistics for the main variables used in the study over the period 2018–2024. The results show substantial variation across firms in TO measures and EM practices.

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Table 2. Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
CETR (Cash ETR)	0.21	0.18	0.00	0.75
GAAP ETR	0.24	0.16	0.00	0.80
BTD (Book–Tax Diff.)	0.05	0.09	–0.20	0.35
Discretionary Accruals (DA)	0.07	0.12	–0.25	0.40
Real EM (REM)	0.04	0.11	–0.20	0.38
Institutional Quality (INSTQ)	0.95	0.32	0.25	1.65
Firm Size (log assets)	14.8	1.6	11.2	19.3
Leverage (Debt/Assets)	0.47	0.21	0.05	0.90
ROA (Return on Assets)	0.041	0.06	–0.20	0.25
Capital Intensity (PPE/Assets)	0.32	0.17	0.05	0.80
Loss Dummy	0.19	0.39	0.00	1.00

The mean CETR is 21 percent, and the mean GAAP ETR is 24 percent, which are below the statutory corporate tax rates in Southern Europe and may indicate the presence of tax planning behavior. The average (BTD) stands at 0.05, indicating moderate differences in accounting and taxable income. Concerning the EM, (DA) has an average value of 0.07, (REM) has an average value of 0.04 as compared to the previous European research that reported moderate manipulation both accrual and real. The mean of (INSTQ) is 0.95, and there is a significant cross-country variation since the governance environment of these four countries, Portugal, Italy, Greece, and Spain, is heterogeneous.

The mean level of the controls in firms includes the average (log assets) at 14.8, the leverage ratios at 47 percent, and (ROA) at 4.1 percent. The level of capital intensity is also relatively high at 32 percent, which evidences the asset-intensive nature of several listed firms in the region. Lastly, the loss dummy shows that the negative pre-tax income is reported in about 19 percent of the firm-year observations.

The authors also conduct a series of preliminary tests to assess the structure of the data before estimating the fixed effects regressions. The Pearson correlation results show that CETR and GAAP ETR are strongly and positively related, which indicates that both measures capture related aspects of firms' tax burdens. Both ETR measures are negatively associated with BTD, confirming that effective tax rates and book tax differences reflect different dimensions of tax outcomes. DA is positively associated with BTD and with both ETR measures, suggesting that accrual-based EM is linked to wider accounting tax differences but does not necessarily reduce effective tax burdens. REM is negatively associated with CETR and GAAP ETR and positively associated with BTD, indicating that real activities are more closely connected with lower tax burdens. INSTQ is positively related to

the ETR measures and negatively related to BTD DA and REM, which supports the view that stronger institutions limit reporting discretion and increase effective tax burdens. The correlations among the explanatory variables do not indicate serious multicollinearity concerns. In addition, the Levin, Lin, Chu, and Im Pesaran Shin unit root tests show that the main variables are stationary at the level, which supports the suitability of the panel data for the subsequent fixed effects regression analysis.

3.1 Regression analysis

3.1.1 Baseline pooled results

Table 3 presents the baseline fixed-effects regressions estimating the effects of discretionary accruals (DA) and real EM (REM) on three tax outcomes: CETR, GAAP ETR, and BTD.

Table 3. Pooled sample, firm fixed effects

Variables	(1) CETR	(2) GAAP ETR	(3) BTD
Discretionary Accruals (DA)	0.041*** (3.12)	0.037*** (2.98)	0.012** (2.21)
Real EM (REM)	–0.028** (–2.45)	–0.021* (–1.89)	0.009 (1.34)
Firm Size (log assets)	0.015** (2.37)	0.012* (1.92)	–0.003 (–1.02)
Leverage	–0.033*** (–3.44)	–0.028*** (–3.05)	0.017*** (3.01)
ROA	0.062*** (4.25)	0.058*** (4.11)	–0.021** (–2.32)
Capital Intensity	0.018* (1.84)	0.015 (1.62)	0.012** (2.05)
Loss Dummy	-	-	0.011 (1.33)
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	3,181	3,181	3,927
R^2 (within)	0.34	0.31	0.27

*Notes: t-statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.10. Variables winsorized at 1% and 99%. Standard errors clustered by firm and year.*

In the pooled sample, both CETR and GAAP ETR have positive and significant relationships with DA, which suggests that accrual manipulation is more likely to increase reported tax burdens than to decrease them. The coexistence of higher ETR and wider BTD indicates that DA is associated with greater accounting-tax divergence, but not with lower effective tax burdens. DA is associated with both higher ETR and wider BTD, suggesting that accrual discretion increases accounting-tax divergence but does not operate as a tax-reducing mechanism in this setting. This result shows that DA is not a powerful tool to use in tax avoidance, but rather it increases the accounting-tax gap, as its positive correlation with BTD reveals. In comparison, REM has negative and significant relations with

both CETR and GAAP ETR, which proves that the main channel of reducing the effective tax rate by firms is through real activities manipulation. These results highlight the fact that, since accruals can be used to meet performance-related objectives, REM is a tax-avoidance mechanism.

3.1.2 Country-specific heterogeneity

Table 4. Country-level sample, firm fixed effects

Variables	CETR	ETR	BTD
Portugal			
Discretionary Accruals (DA)	0.021 (1.21)	0.019 (1.14)	0.008 (1.11)
Real EM (REM)	–0.012 (–0.98)	–0.010 (–0.92)	0.006 (0.91)
Controls	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	204	204	252
R^2 (within)	0.29	0.27	0.22
Italy			
Discretionary Accruals (DA)	0.047*** (3.18)	0.042** (2.54)	0.012* (1.83)
Real EM (REM)	–0.030** (–2.44)	–0.027** (–2.08)	0.010 (1.32)
Controls	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	1,814	1,814	2,240
R^2 (within)	0.35	0.33	0.28
Greece			
Discretionary Accruals (DA)	0.035** (2.19)	0.030* (1.95)	0.011* (1.79)
Real EM (REM)	–0.041*** (–3.01)	–0.036** (–2.48)	0.013*(1.77)
Controls	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	624	624	770
R^2 (within)	0.33	0.30	0.25
Spain			
Discretionary Accruals (DA)	0.040*** (2.99)	0.037** (2.25)	0.009 (1.42)
Real EM (REM)	–0.022* (–1.88)	–0.019 (–1.54)	0.011 (1.39)
Controls	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	539	539	665
R^2 (within)	0.31	0.29	0.24

*Notes: t-statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.10. Variables winsorized at 1% and 99%. Standard errors clustered by firm and year.*

Table 4 disaggregates the pooled regressions by country, revealing that the aggregate results are not uniform across the Southern European countries.
As in Italy and Greece, where it is very high, DA greatly enhances reported ETR, and REM considerably diminishes it, as the pooled estimates show, indicating weaker efforts and poorer book-tax conformity. Similar trends are observed in Spain, although the effect of the REM is insignificant and just a bit higher. Portugal is an outlier, neither DA nor REM materialized, and it is in line with the fact that IFRS-GAAP reconciliation requirements are stronger, which limits the management of accrual-based and real-based earnings. When put collectively, these findings underscore the fact that an EM-TA relationship is predetermined by institutional environments whereby fragmented enforcement predisposes the increased use of REM as a tax-planning instrument. The Discussion section has given an interpretive discussion of the cross-country heterogeneity reported in Table 4.

3.1.3 Institutional quality as moderator

Table 5 incorporates an institutional quality index (INSTQ) to formally test whether governance environments condition the EM–TA relationship. INSTQ enters positively and significantly in both CETR and GAAP ETR regressions, indicating that stronger governance raises effective tax burdens.

Table 5. Institutional Quality as Moderator

Variables	(1) CETR	(2) GAAP ETR	(3) BTD
Discretionary Accruals (DA)	0.038*** (3.05)	0.034** (2.54)	0.010* (1.79)
Real EM (REM)	–0.024** (–2.14)	–0.019* (–1.71)	0.007 (1.22)
Institutional Quality (INSTQ)	0.027*** (3.41)	0.023*** (3.16)	–0.012** (–2.11)
DA × INSTQ	–0.018** (–2.29)	–0.016** (–2.07)	–0.006* (–1.72)
REM × INSTQ	0.014* (1.88)	0.012 (1.56)	–0.004 (–0.98)
Controls	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	3,181	3,181	3,927
R^2 (within)	0.38	0.35	0.29

*Notes: t-statistics in parentheses. *** p<0.01, ** p<0.05, * p<0.10. Standard errors clustered by firm and year. Institutional Quality = composite WGI index (rule of law, regulatory quality, corruption control).*

The interaction findings show that institutional quality conditions the relationship between EM and tax outcomes. The negative and significant DA × INSTQ

coefficient indicates that stronger institutions weaken the positive link between DA and ETR. This should not be read as a reversal of the relationship because the main DA coefficient remains positive. Instead, it implies that institutional oversight limits the extent to which accrual-based discretion leads to higher reported tax burdens and wider accounting-tax gaps. The positive REM × INSTQ coefficient in the CETR model indicates that stronger institutions constrain the tax-reducing effect of real activities manipulation. Thus, institutional quality influences both accrual-based and real-based channels, although its effect varies across tax outcomes.

4. Empirical results

To this point, the current study aimed to examine the relationship between DA and R.E.M. and their impact on tax outcome, targeting the southern European listed companies. The study also examined the moderating role of INSTQ between the aforementioned relationship for the period between 2018 and 2024.

The analysis reveals a positive relationship between DA and ETR among Southern European companies. This demonstrates that accrual-based EM does not operate as a direct tax-reducing strategy in this setting. Instead, it increases reported tax burdens. This result corresponds with Mendoza et al. (2022) in major European economies, Kałdoński and Jewartowski (2020) in Poland, and Assidi et al. (2022) in STOXX Europe 600 companies. They show that higher accrual manipulation may be associated with higher ETRs. The prevailing interpretation is that, within stronger regulatory frameworks and reputational pressure, the accrual choices are mainly used for financial-reporting intentions rather than for lowering corporate tax liabilities.

Simultaneously, DA is also positively associated with BTD in the pooled estimates. This does not inherently contradict the positive relationship between DA and ETR. Rather, this can be explained by the fact that BTD captures the gap between book income and estimated taxable income, whereas ETR captures the tax burden relative to pre-tax income. Therefore, accruals may generate a greater accounting-tax gap while continuing to be associated with higher effective tax rates. This signifies that DA should be interpreted as a mechanism that increases the book-tax gap rather than as a mechanism that reduces tax payments. A different pattern emerges when measuring the relationship between REM and BTD. The results found a positive but not statistically significant result in the pooled model, suggesting that real actions do not create a strong observable divergence between book and taxable income.

The literature also shows mixed findings. On one hand, Assidi et al. (2022), Amidu et al. (2019), and Razali et al. (2019) argued that EM reduces ETRs when it is determined by a tax-avoidance motive. This discrepancy suggests that the relationship between EM and tax outcomes varies across contexts. In fact, the manipulation of accruals will lead to an increase in taxable income burdens in jurisdictions where financial reporting and tax reporting are closely linked. Moreover, when weaker reporting constraints exist, managers can exert greater ability to separate book income from taxable income. Accordingly, the existence of different enforcement, ownership, and reporting systems between southern European countries can subject that empirical evidence to different interpretations, although they are relatively consistent with reporting-based results.

Turning to real EM, our results show a negative relationship with ETR. This Finding can support the view that argues that operational adjustments can work as a more direct pathway for reducing effective tax obligations. In real-life scenarios, such as pricing, discretionary spending, production decisions, and timing of sales or expenses, these activities can affect taxable income more clearly than accrual choices. Henceforth, aligning with other evidence that shows intercompany pricing and tax-driven EM, together with operating decisions, are used to influence tax outcomes. Interestingly, REM does not substantially increase BTD in the pooled models. This result suggests that tax effect is mainly reflected through lower effective tax rates, rather than a clear increase in book-tax differences. This can be explained by the real adjustments being affected by book income and taxable income in the same direction.

As for the moderation effect, our results show that INSTQ has a significant effect on the relationship between EM and tax outcomes. In other words, a strong institution is positively linked with CETR and GAAP ETR and negatively associated with BTD. This indicates that better governance and enforcement are linked with higher effective tax burdens and lower accounting tax divergence. Moreover, we found a negative and significant relation between DA and INSTQ, indicating that stronger institutions weaken the positive association between DA and ETR. Cautiously, assuming a reversal relationship may not be appropriate, because the main DA coefficient remains positive. Instead, this result indicates that institutional monitoring reduces the extent to which accrual-based discretion translates into higher reported tax burdens and wider accounting tax gaps.

Finally, the analysis for country-specific further confirms that the EM and tax relationship is not uniform across Southern Europe. For example, in the Portuguese context, the relationships between DA, REM, and tax burdens were insignificant. This reflects tighter book-tax alignment and reconciliation practices that limit the tax effect of reporting discretion. On the other hand, Italy shows a clearer split: DA

increases ETR while REM reduces ETR. This uniqueness suggests that accruals are mainly linked to financial-reporting objectives in Italy. Moreover, it shows that operational adjustments remain more relevant for tax reduction. Similar results were found in Greece; a stronger REM effect is related to sectoral characteristics such as cash intensity and transfer pricing incentives. Finally, Spain's results were closer to the pooled results. Despite the weak REM effect. This suggests that administrative and disclosure controls may reduce the effectiveness of real-activity tax planning.

In conclusion, our findings indicate that EM does not have a single tax effect. On one hand, DA is associated with higher tax burdens and wider book-tax differences. While REM is more closely linked to lower effective tax rates, on the other hand. Moreover, INSTQ impacts both channels by increasing monitoring and reducing the benefits of opportunistic discretion. Together, our results support the main argument that the relationship between EM and tax outcomes depends on the type of managerial discretion used and the institutional context in which firms operate.

5. Conclusions

The current study seeks to investigate the relationship between DA and REM and their influence on tax outcomes among Southern European listed companies. The study further explores the moderating role of INSTQ in these relationships during the 2018–2024 period. Our findings reveal several important insights. First, we suggest that accrual-based manipulation is associated with higher reported tax burdens rather than lower tax payments, as we found that DAs are positively related to effective tax rates. In parallel, DA increases book-tax differences in the pooled estimates. This finding suggests that under book-tax conformity and regulatory scrutiny, accrual-based EM operates mainly as a financial reporting tool rather than a direct TA tool. Consequently, DA expands accounting-tax divergence rather than directly lowering effective tax burdens.

Second, the negative association between real EM and effective tax rates suggests that operational adjustments may serve as a direct pathway for minimizing tax burdens. Such activities may involve (e.g., pricing decisions, sales, timing expenses, timing production choices, and discretionary expenditure reductions). However, Pooled estimation results show that REM does not materially widen book-tax differences. This implies that the tax consequences of real activities manipulation emerge mainly through reduced effective tax rates rather than wider book-tax gaps. Accordingly, the comparison demonstrates that accrual-based and real-based EM mechanisms influence tax outcomes through different channels.

Third, the findings also show a relevant moderating role for INSTQ. Stronger governance and enforcement attenuate the DA and ETR relationship and partially constrain the tax-reducing effect of REM, especially in the CETR mode. This indicates that INSTQ limits the ability of firms to use managerial discretion for aggressive tax-related purposes. However, the evidence shows that the effect differs between tax measures, supporting the view that ETR and BTD capture distinct dimensions of tax outcomes.

In sum, our study contributes to the existing literature by demonstrating that the EM and tax relationship varies according to the type of earnings manipulation and the strength of institutional environments. For regulators and policymakers, the evidence stresses the importance of improving governance quality, enforcement effectiveness, and reporting transparency. Future comparative studies should treat DA and real activities manipulation as separate mechanisms and should consider institutional differences when evaluating the tax consequences of managerial discretion.

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Author Contributions

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References

1. Abubakar, M. A. (2021). Board of Directors' Structure and Corporate Tax Aggressiveness of Listed Industrial Goods Companies in Nigeria. *Bullion*, *45*(4), 25-30. GS Management: The case of Greece. *Managerial Finance*, *49*(1), 110-134.
2. Amidu, M., Coffie, W., & Acquah, P. (2019). Transfer pricing, EM, and TA of firms in Ghana. *Journal of Financial Crime*, *26*(1), 235-259.
3. Anzuini, A., Pisano, E., Rossi, L., Sanelli, A., Tosti, E., & Zangari, E. (2023). Clever planning or unfair play? Exploring the economic and statistical impacts of TA by multinationals. *Exploring the Economic and Statistical Impacts of TA by Multinationals (October 05, 2023). Bank of Italy Occasional Paper*, (799).
4. Arifin, R., Syarifuddin, S., & Ilham, I. (2025). The Tax Rate Adjustments and Compliance Errors: The Effect of Average Effective Tax Rate Changes on Article 21 Income Tax Withholding. *Amkop Management Accounting Review (AMAR)*, *5*(2), 1428-1437.
5. Assidi, S., & Hussainey, K. (2021). The effect of tax preparers on corporate tax aggressiveness: Evidence from the UK context. *International Journal of Finance & Economics*, *26*(2), 2279-2288.
6. Assidi, S., Farooque, O. A., & Albitar, K. (2022). The nexus between aggressive tax planning and EM in different political systems and the moderating role of corporate governance. *International Journal of Managerial and Financial Accounting*, *14*(4), 344-361.
7. Borlea, S. N., Achim, M. V., & Miron, M. G. A. (2017). Corruption, shadow economy, and economic growth: An empirical survey across the European Union countries. *Studia Universitatis „Vasile Goldis" Arad–Economics Series*, *27*(2), 19-32.
8. Cappellesso, G., & Rodrigues, J. M. (2019). Book-tax Differences as an Indicator of EM and TA: An Analysis in the G-20 Countries/Book-tax Differences Como Indicador de Gerenciamento de Resultados e de Gerenciamento Tributario: Uma Analise nos Paises do G-20. *Revista Contabilidade, Gestao e Governanca (CGG)*, *22*(3), 352-367.
9. Chircop, J., Fabrizi, M., Malaspina, P., & Parbonetti, A. (2023). Anti-mafia police actions, criminal firms, and peer firm TA. *Journal of Accounting Research*, *61*(1), 243-277.
10. Chytis, E., Tasios, S., Georgopoulos, I., & Hortis, Z. (2019). The relationship between TA, company characteristics, and corporate governance: Evidence from Greece.
11. Duhoon, A., & Singh, M. (2023). Corporate TA: a systematic literature review and future research directions. *LBS Journal of Management & Research*, *21*(2), 197-217.
12. Dyreng, S. D., Hanlon, M., & Maydew, E. L. (2019). When does TA result in tax uncertainty?. *The Accounting Review*, *94*(2), 179-203.
13. Fisher, J. M. (2014). Fairer shores: Tax havens, TA, and corporate social responsibility. *BUL Rev.*, *94*, 337.

14. Floropoulos, S., Tsipouridou, M., & Spathis, C. (2025). Financial Reporting Quality in Greece: The Role of Book-Tax Differences and Capital Controls. *Accounting in Europe*, 1-25.
15. Frank, M. M., Lynch, L. J., & Rego, S. O. (2009). Tax reporting aggressiveness and its relation to aggressive financial reporting. *The accounting review*, *84*(2), 467-496.'
16. Hanlon, M., & Heitzman, S. (2010). A review of tax research. *Journal of Accounting and Economics*, *50*(2-3), 127-178.
17. Hanlon, M., Mills, L. F., & Slemrod, J. B. (2005). An empirical examination of corporate tax noncompliance. *Ross School of Business Paper*, (1025).
18. Kałdoński, M., & Jewartowski, T. (2020). Do firms using real EM care about taxes? Evidence from a high book-tax conformity country. *Finance Research Letters*, *35*, 101351.
19. Karjalainen, J., Kasanen, E., Kinnunen, J., & Niskanen, J. (2023). Dividends and TA as drivers of EM: Evidence from dividend-paying private SMEs in Finland. *Journal of Small Business Management*, *61*(2), 906-937.
20. Kolias, G., & Koumanakos, E. (2022). CEO duality and TA: Empirical evidence from Greece. *Journal of International Accounting, Auditing and Taxation*, *47*, 100465.
21. Leuz, C., Nanda, D., & Wysocki, P. D. (2003). EM and investor protection: an international comparison. *Journal of Financial Economics*, *69*(3), 505-527.
22. Lietz, G. M. (2013). TA vs. tax aggressiveness: A unifying conceptual framework. *Tax Aggressiveness: A Unifying Conceptual Framework*.
23. Magerakis, E. (2024). Corporate TA under economic policy uncertainty. Does the quality of institutional governance matter?.
24. Mahmudi, C., Nufus, K., & Said, S. G. (2023). The Effects of Transfer Pricing, Thin Capitalization, Firm Size, And Tax Haven Country Utilization On Tax Aggressiveness. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, *7*(2), 785-797.
25. Marques, M., Rodrigues, L. L., & Craig, R. (2011). EM induced by tax planning: The case of Portuguese private firms. *Journal of International Accounting, Auditing and Taxation*, *20*(2), 83-96.'
26. Mendoza Aviña, M., & Blais, A. (2022). Are tax cuts supporters self-interested and/or partisan? The case of the Tax Cuts and Jobs Act. *American Politics Research*, *50*(3), 416-427.
27. Pereira, Â., Pereira, C., Gomes, L., & Lima, A. (2023). Do taxes still affect earning persistence?. *Administrative Sciences*, *13*(2), 48.
28. Razali, M. W. M., Yi, P. X., Brahmana, R. K., & Tak, A. H. (2019). Malaysian listed firm's TA: Another EM strategy. *International Journal of Academic Research in Business and Social Sciences*, *9*(2), 643-655.
29. Roychowdhury, S. (2006). EM through real activities manipulation. *Journal of accounting and economics*, *42*(3), 335-370.
30. Sirot, B. S. (2024). The effect of financial distress, and EM on TA. *Prosiding Simposium Ilmiah Akuntansi*, 909-925.

31. Slemrod, J. (2004). The economics of corporate tax selfishness. *National Tax Journal*, *57*(4), 877-899.
32. Sousa, M. G. C. M. C. D., Lucena Filho, R. B., & França, R. D. D. (2025). Tax incentives on income as a determinant of the Effective Tax Rate. *Revista Contabilidade & Finanças*, *36*(spe1), e2150.
33. Velte, P. (2023). Sustainable institutional investors, corporate sustainability performance, and corporate TA: Empirical evidence for the European capital market. *Corporate Social Responsibility and Environmental Management*, *30*(5), 2406-2418.
34. Watts, R. L., & Zimmerman, J. L. (1986). Positive accounting theory.