

Accounting-based earnings management: motivations, players, implementation, and detection from the perspective of certified accountants

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ABSTRACT

In the scope of Behavioral Decision Theory, Accounting-based Earnings Management (AEM) may compromise the success of decision making of a firm's stakeholders. Given that AEM constitutes a barrier to the decision-making process, we aim to identify the main motivations of the players of AEM. Besides, in this study we also intend to analyze the implementing and detecting of AEM practices in financial statements and to evaluate whether individual characteristics influence the ability to implement and detect creative accounting practices. To achieve the proposed objectives, a quantitative methodology approach was used. A survey was applied to Portuguese's certified accountants. In the data analyses, we applied the univariate and multiple analysis. Based on 159 observations, we find that most certified accountants indicate the main motivations are related to the reduction of the cost of capital and tax burden, the strength of the "code law system", and that the managers are the main players. Our evidence also shows that the AEM practices are easily implemented and detected in the financial statements. In addition, we find that age, professional experience, and academic qualifications of the certified accountant tend to have an impact on the ability to implement AEM in the financial statements, contrary to gender and training area. Furthermore, gender and academic financial statements. This research is important for the development of the literature, entities that operate in accounting standardization and for the users of accounting and financial information. This study contributes to a better understanding of AEM practice, and it originally combines individual characteristics of accounting professionals with AEM practice.

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1. Introduction

The use of accounting information has an important role in decision-making of a firm's stakeholders. In this sense, accounting for decisions is based on the Behavioral Decision Theory (Hogarth, 1993). When there is failure in disclosure relevant and reliable information it may compromise decision-making process (Maguire & Albright, 2005). The problematic of earnings management is also analyzed within Stakeholder Theory, Cerqueira and Pereira (2019), by considering that several stakeholders must benefit from the cash flows of a firm, as dividends to shareholders, compensations to managers, taxes to governments, among others (Ball, Kothari & Robin, 2000). Therefore, managers may have incentives to exercise discretion when preparing financial statements. For example, in a contracting perspective manager must respond to some target numbers that are specified in formal contracts, Healy and Wahlen (1999). In these terms, there is a tendency to use

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accounting practices to present a more favorable economic and financial situation to benefit firms or their stakeholders, such as the manager (Stolowy & Breton, 2004). These practices may be associated with creative accounting or Accounting-based Earnings Management (AEM).

In literature, there is a distinction between AEM and fraud. AEM, in most opinions, is not considered fraud if developed within accounting standards, taking advantage of gaps, flexibility or subjectivity. AEM develops when financial information is creatively manipulated to influence decision-making (Yadav, 2014). According to Mulford and Comiskey (2005), the accounting practices that intentionally distort or omit amounts or result in financial statements to mislead its users are allegedly fraudulent practices by administrative, civil, or criminal proceedings. Fraud is considered when accounting practices go beyond taking advantage of flexibility, subjectivity, and gaps in accounting standards. AEM is used to systematically misrepresent the values of financial statements, according to Ali Shah, Butt and Bin Tariq (2011). However, for Sen and Inanga (2005), AEM can be beneficial or harmful, depending on the objective that motivated your development. According to Silva, Weffort, Flores and Silva (2014), there are endogenous and exogenous factors that can motivate the development of the AEM practices. On the other hand, the literature suggests that the principals interested in the practices of manipulating facts and figures to achieve pseudo results are accountants, managers, and auditors (Akpanuko & Umoren, 2018, Kraemer, 2005; Saludas 1999). The topic of AEM has encouraged the development of a high number of studies and it is important academics and practitioners (Dechow, Hutton, Kim & Sloan, 2012). One of the main reasons is related to the “failures of economic enterprises have raised a number of credibility questions about Accounting as a System of authentication and the reliability of its report in reaching optimal management and investment decisions” (Akpanuko & Umoren, 2018, p. 292). Several studies relate accounting standards and/or practices to economic crises because it is expected that the context of economic crises affects the AEM-related behavior (Silva et al., 2014, Cerqueira & Pereira, 2020). Another reason is related to the financial scandals that occurred in the United States of America and Europe in the early twenty-first century (Parada & Sanhueza, 2009). Portugal, with the recent fraud and corruption scandals, finds itself in an ethics-unfriendly environment (Montenegro & Rodrigues, 2020). Therefore, there is a need to analyze the AEM practices on Portuguese’ firms. For that purpose, in this study we examine the certified accountants’ perception regarding AEM activities because they are main players of AEM. We aim at knowing whether AEM practices are easy to be implemented and detected in financial statements and whether the individual characteristics of certified accountants (gender, age, professional experience, educational qualifications, and training area) influence the perception of how easy it is to implement and to detect AEM practices in the financial statements. Our study differs from previous studies in several ways. First, we use a sample of Portuguese’s certified accountants and add evidence from another empirical setting. Second, we examine the certified accountant characteristics that are associated with the implementation and detection of the AEM practices. Third, our findings highlight the need to restrict some unethical behavior by people in the workplace and educational institutions invest in the development of ethical values for future accounting, management, and auditing professionals.

This paper is organized as follows. The first is the introduction. In section 2, we describe the theoretical background that supports our research questions. Section 3 describes the research model, data, and sample. Data analysis and results are reported in the subsequent section. Finally, concluding thoughts, limitations, implications, and extensions for future research are presented.

2. Theoretical framework and research questions

2.1 AEM and their potential effects

Accounting is concerned with the preparation, analysis, and disclosure of financial information (Elvisa & Ilgün, 2015). Turner, Weickgenannt and Copeland (2020) argue that the accounting system encompasses the processes, procedures and systems that result in producing financial information on the activity of companies and reporting this information, in a summarized form, to the entity’s internal and external stakeholders. Ibrahim, Ali and Besar (2020) say that the accounting system is a vital resource for companies as it can facilitate decision making, planning, and controlling activities of an organization. However, an entity is only correctly conducted if decisions, implementation, and control are based on information that respects the quality criteria (Srivastava and Lognathan, 2016). Financial information has quality when there is evidence that financial information is accurate, relevant, timely and complete, as well as transparent and non-misleading (Sari, Afifah, Susanto & Sueb, 2019; Jonas & Blanchet, 2000). However, AEM may compromise the quality of financial reporting (Gutiérrez & Rodríguez, 2019; Bhasin, 2016) and it is used to systematically misrepresent firms’ earnings (income and expenses) and assets and liabilities (Yadav, 2014). According to Ali Shah et al. (2011, p. 531), AEM “*refers to the use of accounting knowledge to influence the reported figures, while remaining within the jurisdiction of accounting rules and laws, so that instead of showing the actual performance or position of the company, they reflect what the management wants to tell the stakeholders*”. AEM is a phenomenon that can be beneficial or harmful (Sen & Inanga, 2005). It is beneficial when it is developed to, according to the flexibility and subjectivity of accounting standards, adjust the information to the specificity of each company. It is harmful when used to distort financial information and to achieve certain objectives. However, reality has shown that, in most cases, it is used in an undesirable way to attract new investors, presenting exaggerated results (positive or negative) and deceiving financial statements’ users, mainly the State and the Legal Authorities (Sen & Inanga, 2005). According to Gutiérrez and Rodríguez (2019, p. 43), the “*manipulated earnings worsen*

decision-making process". In addition, Dechow, Ge and Schrand (2010) show that there are several determinants and consequences associated with earnings quality. Specifically, certified accountants may affect the value of several financial statement's items, essentially the balance sheet and income statement items, but they may also affect the assessment and/or disclosure of the accounting information (Stolowy & Breton, 2004).

2.2 Motivations, implementation, and main players of the AEM

AEM practices may influence the decision-maker process and it may lead to the failure of disclosing relevant and true information, thus compromising efficient decisions (Maguire & Albright, 2005). The barriers that hinder success in decision-making are the focus of Behavioral Decision Theory (BDT). This theory has two interrelated facets, namely normative and descriptive theories. "*The normative theory is concerned with prescribing courses of action that conform most closely to the decision maker's beliefs and values. Describing these beliefs and values and the manner in which individuals incorporate them into their decisions is the aim of descriptive decision theory*" (Slovic Fischhoff & Lichtenstein, 1977, 265). Research in BDT has shown that people are faced with difficult decisions (Maguire & Albright, 2005), which can be mitigated if they have access to true and reliable information. However, flexibility, subjectivity and gaps in accounting standards can influence human behavior to the extent that it can enhance the development of AEM practices. AEM is a barrier to the foundations of this theory.

In the literature there are several motivations that lead to the development of AEM practices. According to Mayoral (1998), the objectives of AEM are grouped into three categories: (1) improve the image presented; (2) stabilize the image over the years, or (3) to weaken the image shown. The motivations associated with AEM depend on the institutional context in which the companies operate (Leuz, Nandan & Wysocki, 2003; Cieslewicz, 2014; Papanastasopoulos, 2014). In this case, there are two fundamental systems to characterize the environment in which companies operate, the Anglo-Saxon accounting system (common law) and the Continental-European accounting system (code law) (Ball et al., 2000). Countries classified under the common law accounting system (e.g., the United Kingdom and the USA), accounting standards are produced by private bodies (Ball et al., 2000), thus accounting is excluded from the governmental sphere. This accounting system is essentially characterized by the existence of large capital markets, by the strong independence between accounting and taxation and by the fact that investors represent the main source of financing (Ball et al., 2000). Given the importance of these markets for Anglo-Saxon companies, managers are encouraged to use AEM to attract investors and influence the opinion of market analysts, to maximize the company's value (Habib & Hansen, 2009). Concerning countries classified as code law (e.g., France and Germany), accounting standards are established by government entities (Ball et al., 2000). The accounting system of continental European countries is essentially characterized by a relatively small capital market, the main source of financing being financial institutions (banks), so financial information is oriented towards creditors (Ball et al., 2000; Leuz et al., 2003). This system is also characterized by its excessive regulation and the strong link between accounting and taxation (Burgstahler, Hail & Leuz, 2006; Moreira, 2006). La Porta, Lopez-de-Silanes, Shleifer and Vishiny (1998) add that the countries that are part of this system are mainly small, and most companies are also small. However, there are some exceptions, for example, Japan represents the second-largest economy in the world and is part of this system. The behavior and motivations inherent to AEM will be affected by the characteristics of the Anglo-Saxon or Continental-European systems (Halaoua, Handi & Mejri, 2017). Amat, Blake and Dowds (1996), in a comparative study between two European economies, with different accounting systems (United Kingdom-common law and Spain - code law), conclude that, like the United Kingdom, AEM in Spain assumes some relevance in the economic reality. On the other hand, about the motivations associated with AEM, the reduction of the tax burden and the cost of capital is more relevant in Spain than in the United Kingdom. Baralexis (2004), when analyzing the Greek economy, finds empirical evidence that large European companies manipulate profit in an upward way to facilitate and obtain advantages in contracting bank loans and, on the other hand, small European companies manipulate the results downward, intending to pay fewer taxes.

It should be noted that the motivations of the code law accounting system are contradictory (Eilifsen, Knivsfå & Sættem, 1999; Moreira, 2006). This is because companies prefer to present reasonable financial indicators to be able to borrow at the most favorable rates and, on the other hand, prefer to present lower accounting results to reduce the tax burden. However, it seems that these elements are associated with a self-control mechanism, that is, there seems to be a trade-off between financial needs and the tax burden or vice versa (Eilifsen et al., 1999). Portugal is legally framed in the Continental-European accounting system (La Porta et al., 1998). The legal system is based on Roman law, where there is a strong relationship between accounting and taxation (Moreira, 2006). According to this author, companies are prone to present positive results close to zero (the objective is not to present negative results), to pay less tax and, on the other hand, tend to report results more favorable when they need to resort to financing. The literature suggests that the motivations associated with AEM practices vary by country, because of the accounting system, the economy, and the composition of the business industry influence AEM practices (Ball et al., 2000; Baralexis, 2004). In Portugal, some studies analyze some motivations underlying the AEM practices, but, normally, in these, they are elaborated regarding one or two motivations, that is, some specific motivational factors from a wide list of motivations are addressed. According to Scott (2003), Stolowy and Breton (2004) and Moreira (2006), the main motivations underlying AEM are related to the capital market, contractual, legal, tax and financing relationships. The current accounting system allows the development of the AEM, which may motivate less ethical behaviors that deviate from the main objectives, providing useful information for decision making. Therefore, this study, based on DBT seeks to assess the following research question:

RQ1 - What are the main motivations that justify AEM practices?

AEM practices or accounting strategies are not just subject to change but to a corporate policy designed to modify or infer the view of users of financial information (Verrecchia, 1983). The flexibility and gaps offered by the accounting system allow the development of AEM. There are several interested in the phenomenon of AEM. Stolowy and Breton (2004), like Healy and Wahlen (1999), suggest the existence of three groups that influence the development of AEM practices according to their interests, namely (1) the market (investors and intermediaries), (2) the entity itself (managers, employees and other interested parties) and (3) society (State, other public entities and local government). Disaggregating the composition of the groups mentioned above, the main “(...) *players in the game of manipulation accounts*” (Stolowy and Breton, 2004, p. 11) are managers, accountants, auditors, financial analysts, regulators and investment banks (Jones, 2011). According to Amat, Blake and Dowds (1999), Saludas (1999) and Kraemer (2005), these practices are essentially developed by managers, auditors, and accountants. In this context, it is intended to answer the following research question:

RQ2 - Who are the main players?

According to Remenarić, Kenfelja and Mijoč (2018), AEM consists essentially in the use of practices of manipulation of financial information which occur because accounting standards require some accounting estimates. These allow the manipulation of off-balance-sheet financing items; changes in depreciation methods and accounting policies; manipulation of income and expense items; changes in the fair value; overestimation of revenues by recording fictitious sales revenues; manipulation of accruals. Jawad and Xia (2015) state that innovation is an essential part of AEM practices in accounting practices. AEM practices can have a positive effect on a company's business in the short run, but in the long term, it may result in reduced stock prices, insolvency, and even bankruptcy (Remenarić et al., 2018). According to Momani and Obeidat (2013), in the past two decades, stakeholders, such as investors, creditors and shareholders, have made decisions based on inaccurate information resulting in large losses of money. The international financial and accounting scandals have raised deep questions on the moral values and fragilities of accountants and business managers (Montenegro and Rodrigues, 2020) and which reveals that companies develop AEM practices to reach a specific objective. Furthermore, the ease of development of AEM constitutes a barrier to the foundations of DBT. Given that AEM compromises the success in decision making, within the scope of DBT, this study is intended to analyze whether it is easy to implement AEM practices and answer the next research question:

RQ3 - Is it easy to implement AEM practices?

Regarding the role of managers in the development of AEM, who are also responsible for firm's performance, they can use the flexibility of the regulatory framework to manipulate earnings (Ferreira, 2003). Besides, if managers do not believe in the efficiency of the market, they can also manipulate the amounts submitted in the financial statements (Stolowy & Breton, 2004; Cerqueira & Pereira, 2019). If the annual results are unfavorable, managers may take advantage of the existing flexibility in the Accounting Standards to develop AEM practices and, in turn, modify the results in certain ways (Jones, 2011). The detailed selection of accounting policies, which provide for the development of AEM practices, is strategically designed and approved by members of the administration (Cosenza, 2003), because they use AEM practices as a means of influencing the accounts and, consequently, the users' perception of financial statements (Jones, 2011). Thus, the main beneficiaries of AEM are managers, given that they have diverse interests and control the instruments that allow it to be carried out (Cosenza, 2002). Managers may modify the financial statements' values in favor of the firm to reduce the cost of capital, decrease the company's overall risk, avoid non-compliance with contractual clauses, minimize taxation, among others. (Stolowy & Breton, 2004). However, if distortions in financial statements' values are detected, the cost of capital may increase (Dechow & Skinner, 2000). Managers can also resort to AEM according to their interests, that is, when the objective is associated with maximizing their remuneration (Jones, 2011), this behavior is classified as opportunistic manipulation (Beneish, 2001). Regarding the role of accountants, they are fundamental in the preparation of financial information and can play a crucial role in AEM. Usually, accountants implement AEM practices, as they are often pressured or encouraged to submit to the performance of an activity characterized as AEM, designed as an organizational strategy by the company's management (Cosenza, 2003). But, sometimes, accountants also use their knowledge of accounting rules/standards to help the manager/administrator to manipulate the numbers reported in the financial statements (Amat et al., 1996; Amat et al., 1999; Blake, Bond, Amat & Oliveras, 2000). However, this goes against the primary objective of accounting, which is to provide accurate and timely information to financial statements' users, thus helping the decision-making process. Concerning the auditor, his role is to certify financial information, that is, whether it is true and appropriate (Jones, 2011). Auditors are responsible for detecting irregularities, transmitting their opinions independently, with social and ethical responsibility and being aware of the relevance of financial statements to users (Santos & Grateron, 2003). Thus, we intend to answer the following question:

RQ4 - Are AEM practices easy to detect in financial statements?

Several authors argue that individual characteristics influence perception or behavior about a particular subject (Ge, Matsumoto & Zhang, 2011). Actually, some studies focused on managers' behavior found differences based on individual

characteristics, such as Keller, Smith and Smith (2007) and Francis, Hasan, Park and Wu (2015). According to Keller et al. (2007, p. 299) “*past research suggests that factors such as gender, educational level, religiosity, and work experience may be related to the development of a person’s ethical standards*”. Montenegro and Rodrigues (2020) conclude that the gender, age, education (and accounting ethics education) and experience influence of Portuguese accountants’ judgments. Thus, this study explored whether the individual characteristics of certified accountants influence their perception of AEM, specifically, it is verified whether individual characteristics influence the perception of certified accountants with the ease of detection in the financial. Thus:

RQ5 - *Do the individual characteristics of the certified accountant influence your perception of the ease of implementing AEM practices?;*

RQ6 - *Do the individual characteristics of the certified accountant influence your perception of the ease of detecting AEM practices?*

3. Methodology

In this research, the questionnaire survey is used as a data collection method. The questionnaire is split into two groups. The first includes questions about the respondent’s demographics (gender, age, experience, etc.) and the second group includes questions that allow us to answer the research hypotheses formulated in this research. Specifically, this later group includes a question about the motivations that lead to developing AEM practices following Amat et al. (1996), Tassadaq and Malik (2015) and Bhasin (2016), a question about the main players as Tassadaq and Malik (2015) and Bhasin (2016), one question to identify the ease of implementing AEM and, another, to assess the ease of detecting AEM practices in financial statements (Knežević, Mizdraković & Arežina, 2012; Tassadaq & Malik, 2015, Bhasin, 2016). This last set of variables was measured on a 5-point Likert scale.

The target population of this study is the certified accountants, as they are responsible for recognizing and measuring accounting transactions, as well as preparing financial information reporting. In the application of the survey, we had the collaboration of the Portuguese Certified Accountants Association, who made it available on its official website. The sample consists of all accountants’ certificates completed and submitted answers to the questionnaire survey from 2nd to 23rd October 2017. We obtained 171 responses, but 12 were eliminated because respondents were not certified accountants (10) and 2 were incomplete. Therefore, in the data analysis we consider 159 valid answers. As there are more than 70,000 certified accountants, it is a convenience sample and not probabilistic, considered valid in previous studies (Montenegro & Rodrigues, 2020; Cepêda & Monteiro, 2020).

For data analysis, we used the Statistical Package for the Social Sciences (SPSS), version 25 for Windows. We have performed a descriptive and statistical analysis of the data. Concerning descriptive statistics, percentages and frequencies of respondents were used. Statistical analysis of the data includes the use of non-parametric tests and association tests (Martins, 2011). Non-parametric is used to assess the mean position of variables. Spearman’s correlation test is used to analyze the correlation between two ordinal variables. Finally, the multivariate linear regression model is used to study the relationship between the dependent variables [ease of implementing AEM (*IMP_AEM*); ease of detecting AEM (*DET_AEM*)] and the independent variables (Hair, Anderson, Tatham & Black, 1998). We estimate the following regressions to answer the last two research questions (RQ5 and RQ6):

$$IMP_AEM = \beta_0 + \beta_1 ProfExp + \beta_2 Gender + \beta_3 Age + \beta_4 EdQual + \beta_5 TraiArea + \varepsilon \quad (1)$$

$$DET_AEM = \beta_0 + \beta_1 ProfExp + \beta_2 Gender + \beta_3 Age + \beta_4 EdQual + \beta_5 TraiArea + \varepsilon \quad (2)$$

where the independent variables are defined as follows: *ProExp* (Professional experience) is the number of years working as a certified accountant; *Gender* is the gender of the certified accounting (1. Female; 2 Male); *Age* is the number which corresponds to the age of the certified accountant; *EdQual* corresponds to the academic qualifications of the certified accountant (1. Secondary; education; 2. Bachelor degree; 3. Master degree; 4. PhD); *TraiArea* is the area of training area of certified accountant (1. Auditing; 2. Accounting; 3. Economics; 4. Finance; 5. Management; 6. Other).

4. Results and discussion

4.1. Sample characterization

Regarding professional experience, most certified accountants are male (53%), have worked for over 5 or more years (85%). They are over 30 or more years old (84%), being the predominant range 30 to 40 years old. In addition, (60%), holds a degree or higher education (100%) in accounting (81%), management (9%), audit (7%), finance (7%), and economics (3%).

4.2. Data analysis and discussion

This subsection presents the research results to answer the six research questions previously presented.

RQ1: In this research, it is essential to find answers that justify the occurrence of AEM practices in Portugal. According to certified accountants, minimizing the tax burden, reducing the cost of capital and complying with contractual clauses are the main motivations that lead individuals to use creative practices, with position average of 3.96, 3.58, and 3.45, respectively (Table 1).

Table 1
Main motivations underlying the application of AEM practices

Motivations	Mean position	Test statistics ^a	
Influence of the capital market	3.42	N	159
Maximizing managers' remuneration	3.33	Chi-square	62.210
Reduction in the cost of capital	3.58	Df	5
Compliance with debt agreements (contractual clauses)	3.45	Significance	.000
Avoid political costs (through state regulation, for example, increases in audits,	3.28	a. Teste Friedman	
Minimize the tax burden	3.96		

This result is similar to those for Spain and Kenya, because minimizing the tax burden represents the main motivation for the practice of AEM (Amat et al., 1996; Kamau, Mutiso & Ngui, 2012). In Bangladesh, it is related to capital market pressure and compliance with debt agreements (Sen & Inanga, 2005). In Pakistan, it is mainly related to the capital market and competition (Tassadaq & Malik, 2015). In Argentina, Brazil, Colombia, the USA and Venezuela the main motivations are the capital market and tax benefits (Guevara & Cosenza, 2004). According to Santos and Grateron (2003), in the literature, it is common to find several divergences in the main reasons that motivate their inclusion. However, AEM practices depend on the objectives that the firm seeks to achieve in the competitive market, the main objective being to distort financial statements (Santos & Grateron, 2003).

RQ2: Given that Portuguese firms develop AEM practices, it is crucial to unravel individuals who are involved with creative accounting practices. Most AEM practices are implemented by managers (69%) and accountants (18%), according to the beliefs of certified accountants. On the other hand, only 11% and 2% of respondents consider that the Chief Executive Officer (CEO) and auditors are, respectively, the main responsible for the use of AEM practices. Based on this evidence, it is possible to state that, in the Portuguese context, the main responsible for the implementation of AEM practices are managers and accountants. In the same sense, both in India (Bhasin, 2016) and Pakistan (Tassadaq & Malik, 2015), the main responsibilities are managers, accountants, auditors and CEO, in order of relevance. On the other hand, in Argentina, Brazil, Colombia, the USA and Venezuela are the managers and the auditors (Guevara & Cosenza, 2004). Salome, Ifeanyi, Ezemoyih and Echezonachi (2012) state that managers are primarily responsible for the practice of AEM, because accountants see AEM as an "obligation", that is, they develop AEM practices according to management orders.

RQ3: The use of AEM practices requires certain knowledge, namely, regarding the accounting system. Results show that 86% of the respondents agree or totally agree that AEM practices development is easy. In Pakistan, also from the accountants' point of view, AEM practices are easily applicable (Tassadaq & Malik, 2015). In contrast, Vladu and Grosanu (2011) conclude that in Romania it is difficult to implement them.

RQ4: Given that AEM practices can distort the information contained in financial statements, it is examined whether it is possible to detect these practices. Results show that 63% of certified accountants agree or strongly agree with the possibility of identifying AEM practices in the financial statements. On the other hand, 31% of respondents strongly disagree or disagree with the above. Schipper (1989) similarly states that AEM practice is easy to detect in financial statements. However, they are relatively easy to identify in the year of change, but in later years they are much less discernible. According to Sen and Inanga (2005), some AEM practices can be identified through the financial statements' analysis. On the other hand, in India and Pakistan, AEM practices are difficult to identify on the financial information reporting (Tassadaq & Malik, 2015; Bhasin, 2016).

RQ5 and RQ6: Individual characteristics of the certified accountant may influence your perception about being easy to implement and detect AEM practices. Multivariate linear regression analysis demonstrates that the adjusted R² value suggests that part of the dependent variable variance may be explained by three independent variables ("ager", "professional experience", and "educational qualifications") in the regression model (Adjusted R²=0.224) (Table 2). The certified accountant's age has a negative impact on your perception of the ease of implementing AEM practices ($\beta=-0.209$; $p<0.05$). Thus, it can be concluded that the youngest accountants are those who indicate that AEM practice is easy to implement. The result of the multivariate linear regression model indicates also a statistically significant correlation between "professional experience" and "educational qualifications" of the certified accountant and "AEM practice is easy to implement" ($\beta = 0.35$; $p<0.01$ and $\beta=-0.19$; $p<0.05$, respectively). This means that for certified accountants with more experience and less academic qualifications it is easier to implement AEM practices. On the other hand, the results show that the "gender" and "training area" variables have no impact on the "AEM practice is easy to implement" variable.

Table 2

Result of the multivariate linear regression model individual characteristics of the certified accountant and perception of the ease of implementing AEM practices

Equation 1		Non-Standard Coefficients		Standard Coefficients	t-value	Sig.
Dependent Variable	Independent Variables	β	Standard Error	Beta (β)		
AEM practice is easy to be implementing	Constant	4.571	0.475		9.624	0.000
	Professional experience	0.341	0.097	0.350	3.524	0.001
	Gender	0.030	0.118	0.018	0.251	0.802
	Age	-0.025	0.011	-0.209	-2.276	0.024
	Educational qualifications	-0.167	0.071	-0.190	-2.334	0.021
	Training area	-0.114	0.063	-0.152	-1.820	0.071
ANOVA^a						
Model		Sum of squares	Df	Mean squares	F	Sig.
1	Regression	23.781	5	4.756	8.809	.000 ^a
	Residues	82.609	153	0.540		
	Total	106.309	158			
Summarization of the Model						
Model	R	R square	R square adjusted	Standard Error of the Forecast		
1	.473	0.224	0.198	0.735		

Table 3 documents the results of the multivariate linear regression. The reported adjusted R^2 suggests that part of the dependent variable variance may be explained by two independent variables (“gender” and “educational qualifications”) in the regression model (Adjusted $R^2=0.131$). The certified accountant’s gender has an impact on your perception of the ease of identifying AEM practices ($\beta=0.15$; $p<0.05$). Thus, this result suggests that male accountants understand that AEM practices are easier to identify in financial statements than the female ones. The result of the multivariate linear regression model indicates a statistically significant and negative correlation between “educational qualifications” of the certified accountant and “AEM practice is easy to identify in financial statements” ($\beta=-0.297$; $p<0.01$). This is consistent with certified accountants exhibiting fewer academic qualifications easily identifying AEM practices. On the other hand, the results show that the “professional experience”, “age” and “training area” variables have no impact on the “AEM practice is easy to identify in financial statements” variable.

Table 3

Result of the multivariate linear regression model individual characteristics of the certified accountant and perception of the ease of identifying AEM practices

Equation 2		Non-Standard Coefficients		Standard Coefficients	t-value	Sig.
Dependent Variable	Independent Variables	β	Standard Error	Beta (β)		
AEM practice is easy to identify in financial statements	Constant	3.456	0.626		5.524	0.000
	Professional experience	0.150	0.127	0.124	1.180	0.240
	Gender ^b	0.315	0.155	0.154	2.027	0.044
	Age	-0.010	0.014	-0.068	-0.697	0.487
	Educational qualifications	-0.297	0.094	-0.272	-3.162	0.002
	Training area	0.023	0.083	0.025	0.28	0.780
ANOVA^a						
Model		Sum of squares	Df	Mean squares	F	Sig.
1	Regression	21.518	5	4.304	4.594	.001 ^a
	Residues	143.325	153	0.937		
	Total	164.843	158			
Summarization of the Model						
Model	R	R square	R square adjusted	Standard Error of the Forecast		
1	.361	0.131	0.102	0.968		

Overall, we find evidence that the individual characteristics of certified accountants that influence the perception about the ability to implement AEM practices are “age”, “educational qualifications”, and “professional experience”. Furthermore, the ability to detect AEM practices in financial statements is related to “gender” and “educational qualifications” of the certified accountants. Montenegro and Rodrigues (2020), in different research contexts, found that gender, age, education (and accounting ethics education) and experience are significant predictors of accountants’ judgments on earnings management.

5. Conclusions

This research aims to analyze AEM in Portugal. Specifically, this research aims to identify the main motivations for developing AEM practices, the main players and the easy AEM practices are implemented and detected in the Financial Statements. In addition, we examine the relationship between individual characteristics of certified accountants (gender, age, professional experience, educational qualifications, and training area) and ease of implementing and identifying AEM practices in financial statements. The results conclude that the main players are managers and their primary motivations are related to the reduction of the cost of capital and taxes, corroborating the results of Amat et al. (1996) in the case of Spain and Kamau et al. (2012) for Kenya. One possible reason may be the fact that Portugal is classified as a code law system (Scott, 2003; Moreira, 2006; Othman & Zeghal, 2006). Results also reveal that it is easy implementing and easy detecting AEM practices in the financial statement (according to studies of Tassadaq and Malik, 2015 and fundamentals of Schipper, 1989) and that both variables are correlated. The ability to implement AEM practice is related to age, academic qualifications, and experience of the certified accountants, while the ability to detect AEM practices in financial statements varies with the gender and academic qualifications of accounting professionals. The results of this study also indicate that AEM practice is easy to implement, given the subjectivity, flexibility, and gaps of Portuguese accounting standards. The introduction of unethical elements implies that the resulting financial information becomes anything but true and fair (Sen & Inang, 2005). The AEM practices can influence decisions intentionally, which is a barrier to the BDT.

This study will contribute to the development of the literature, given the small number of studies in this area in Portugal, a European country. Despite several studies in Europa, no research relates the certified accountants' characteristics and easy to implement and detect AEM practices. This research is also crucial for entities that operate in the accounting normalization system, as since based on the results they can develop improvements in accounting standards to restrict the development of AEM practices. Given that in this study we identify the main motivations and players in AEM, it brings some alerts regarding the financial statements that may not represent the true and appropriate image of the firms due to preparers/managers using EAM. Consequently, decisions made by interested parties, such as investors, creditors, and shareholders, based on inaccurate information, subject to different AEM practices, may result in large losses of money (Momani & Obeidat, 2013). In the end, bad decisions may compromise the survival or growth of firms, as well as the development of the economy, affecting citizens' quality of life. Furthermore, as AEM does not provide a "true and fair" view of financial and economic performance (Bhasin, 2016), stakeholders, including the community, ceased to trust in the financial information provided by firms and will question their credibility and reputation. Given the seriousness caused by AEM practices, educational institutions should invest in the development of ethical values for future accounting, management, and auditing professionals.

During this research, we find some limitations. Initially, in the literature, the number of scientific articles referring to the scope of accounting in Portugal was reduced, which extended to the empirical study. Besides, most studies are developed in the common law accounting system, making it difficult to perceive and interpret AEM, namely in the recognition of AEM practices in financial statements. Concerning the questionnaire survey, the reluctance of certified accountants to complete the questionnaire stands out due to the number of responses obtained. In this sense, another limitation that must be mentioned refers to the impossibility of generalizing the conclusions of this study, since we opted for a convenience sample. To future lines of research, we suggest applying a questionnaire to managers and auditors, and subsequent comparison with the results obtained in this investigation. In this way, the study of the magnitude of critical accounting in Portugal is complemented from different perspectives.

References

- Akpanuko, E.E., & Umoren, N.J. (2018). The influence of creative accounting on the credibility of accounting reports. *Journal of Financial Reporting and Accounting*, 16(2), 292-310
- Ali Shah, S.Z., Butt, S.A., & Bin Tariq, D. (2011). Use or abuse of creative accounting techniques. *International Journal of Trade, Economics and Finance*, 2(6), 531-536.
- Amat, O., Blake, J., & Dowds, J. (1999). *The ethics of creative accounting*, Economics Working Paper. Universitat Pompeu Fabra.
- Amat, O., Blake, J., & Gutiérrez, S. (1996). La contabilidad creativa en España y en el Reino Unido: Un estudio comparativo. *Barcelona Management Review*, 3, 68-75.
- Ball, R., Kothari, S.P., & Robin, A. (2000). The effect of international institutional factors on properties of accounting earnings. *Journal of Accounting and Economics*, 29(1), 1-51.
- Baralexis, S. (2004). Creative accounting in small advancing countries: The Greek case. *Managerial Auditing Journal*, 19(3), 440-461.
- Beneish, M.D. (2001). Earnings management: A perspective. *Managerial Finance*, 27(12), 3-17
- Bhasin, M.L. (2016). Creative accounting practices: An empirical study of India. *European Journal of Accounting, Finance and Business*, 4(1), 10 - 30.
- Blake, J., Bond, R., Amat, O., & Oliveras, E. (2000). The ethics of creative accounting-some Spanish evidence. *Business Ethics: A European Review*, 9(3), 136 - 142.

- Burgstahler, D.C., Hail, L., & Leuz, C. (2006). The Importance of Reporting Incentives: Earnings Management in European Private and Public Firms. *The Accounting Review*, 81(5), 983–1016.
- Cepêda, C. L. M., & Monteiro, A. P. (2020). The Accountant's Perception of the Usefulness of Financial Information in Decision Making-A Study in Portugal. *Revista Brasileira de Gestão de Negócios*, 22(2), 363-380.
- Cerqueira, A., & Pereira, C. (2019). *Earnings Management and Stock Market Reaction*, in International Financial Reporting Standards and New Directions in Earnings Management, IGI- Global. doi: 10.4018/978-1-5225-7817-8.
- Cerqueira, A., & Pereira, C. (2020). The Effect of Economic Conditions on Accounting Conservatism under IFRS in Europe. *Review of Economic Perspectives*, 20(2), 137-169.
- Cieslewicz, J.K. (2014). Relationships between national economic culture, institutions, and accounting: Implications for IFRS: *Critical Perspectives on Accounting*, 25(6), 511 – 528.
- Cosenza, J.P. (2002). Os efeitos colaterais da contabilidade criativa. *Revista de Contabilidade do Mestrado em Ciências Contábeis da UERJ*, 7(2), 63–78
- Cosenza, J.P. (2003). Contabilidade criativa: As duas faces de uma mesma moeda, *Pensar Contábil*, 6(20), 4–3.
- Dechow, P.M., & Skinner, D. (2000). Earnings management: Reconciling the views of accounting academics, practitioners and regulators. *Accounting Horizons*, 4(2), 235 – 250.
- Dechow, P., Ge, W., & Schrand, C. (2010). Understanding Earnings Quality: a Review of the Proxies, their Determinants and their Consequences. *Journal of Accounting and Economics*, 50(2-3), 344-401.
- Dechow, P.M., Hutton, A.P., Kim, J.H. & Sloan, R.G. (2012). Detecting earnings management: A new approach. *Journal of accounting research*, 50(2), 275-334.
- Eilifsen, A., Knivsfälä IV, K.H., & Sættem, F. (1999), Earnings manipulation: Cost of capital versus tax. *European Accounting Review*, 8(3), 481 – 491.
- Elvisa, B., & Ilgün, E. (2015), Impact of Accounting Information Systems on Decision Making Case of Bosnia and Herzegovina. *European Researcher*, 96(7), 460–470.
- Ferreira, A.S. (2003), Teoria positiva de contabilidade. *Revista de Contabilidade e Comércio*, 59(234 – 235), 1– 8.
- Francis, B., Hasan, I., Park, J.C., & Wu, Q. (2015). Gender differences in financial reporting decision making: Evidence from accounting conservatism. *Contemporary Accounting Research*, 32(3), 1285-1318.
- Ge, W., Matsumoto, D., & Zhang, J.L. (2011), Do CFOs have style? An empirical investigation of the effect of individual CFOs on accounting practices. *Contemporary Accounting Research*, 28(4), 1141-1179.
- Guevara, I., & Cosenza, J. (2004). Los auditores independientes y la contabilidad creativa: Estudio empírico comparativo. *Revista Compendium*, 6(12), 5 – 24.
- Gutiérrez, A.L., & Rodríguez, M.C. (2019). A review on the multidimensional analysis of earnings quality. *Revista de Contabilidad-Spanish Accounting Review*, 22(1), 41-60.
- Habib, A., & Hansen, J.C. (2009). Target shooting: Review of earnings management around earnings benchmarks. *Journal Accounting Literature*, 27, 25–75.
- Hair, J.F.J., Anderson, R.E., Tatham, R.L., & Black, W.C. (1998). *Multivariate data analysis* (5th ed.), New Jersey: Prentice Hall.
- Halaoua, S., Hamdi, B., & Mejri, T. (2017). Earnings management to exceed thresholds in continental and anglo-saxon accounting models: The british and french cases. *Research in International Business and Finance*, 39, 513 – 529.
- Healy, P., & Wahlen, J. (1999). A Review of the Earnings Management Literature and Its Implications for Standard Setting'. *Accounting Horizons*, 13(4), 365-383.
- Hogarth, R.M. (1993), Accounting for decisions and decisions for accounting. *Accounting, Organizations and Society*, 18(5), 407-424.
- Ibrahim, F., Ali, D.N.H., & Besar, N.S.A. (2020). Accounting information systems (AIS) in SMEs: Towards an integrated framework. *International Journal of Asian Business and Information Management*, 11(2), 51–67.
- Jawad, F.A., & Xia, X. (2015), International financial reporting standards and moral hazard of creative accounting on hedging. *International Journal of Finance and Accounting*, 4(1), 60-70.
- Jonas, G.J., & Blanchet, J. (2000). Assessing Quality of Financial Reporting. *American Accounting Association Accounting Horizons*, 14(3), 353–363.
- Jones, M. (2011). *Creative accounting, fraud and international scandals*. John Wiley and Sons, England.
- Kamau, C., Mutiso, A. & Nguai, D. (2012). Tax avoidance and evasion as a factor influencing creative accounting practice among companies in Kenya. *Journal of Business Studies Quarterly*, 4(2), 77 – 84.
- Keller, A.C., Smith, K.T., & Smith, L.M. (2007). Do gender, educational level, religiosity, and work experience affect the ethical decision-making of US accountants?. *Critical perspectives on accounting*, 18(3), 299-314.
- Knežević, G., Mizdraković, V., & Arežina. N. (2012). Management as cause and instrument of creative accounting suppression. *Management*, 62(1), 89 – 95.
- Kraemer, M.E. (2005). Contabilidade criativa: Maquiando as demonstrações contábeis. *Pensar Contábil*, 7(28), 1 – 13.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1998). Law and finance. *Journal of Political Economy*, 106(6), 1113 – 1155
- Leuz, C., Nanda, D., & Wysocki, P.D. (2003). Earnings management and investor protection: An international comparison. *Journal of Financial Economics*, 69(3), 505 – 527.
- Maguire, L.A., & Albright, E.A. (2005). Can behavioral decision theory explain risk-averse fire management decisions?. *Forest Ecology and Management*, 211(1-2), 47-58.
- Martins, C. (2011). *Manual de análise de dados quantitativos com recurso ao IBM SPSS: Saber decidir, fazer, interpretar*

- e redigir*. Psiquilíbrios Edições, Braga.
- Mayoral, J. (1998). Un recorrido por la contabilidad positiva. *Revista Española de Financiación y Contabilidad*, 17(95), 395 – 426.
- Momani, M.A., & Obeidat, M.I. (2013). The effect of auditors' ethics on their detection of AEM practices: A field study. *International Journal of Business and Management*, 8(13), 118 – 136.
- Montenegro, T. M., & Rodrigues, L. L. (2020). Determinants of the Attitudes of Portuguese Accounting Students and Professionals Towards Earnings Management. *Journal of Academic Ethics*, 18(3), 301-332.
- Moreira, J. (2006). *Are Financing need a constraint to earnings management? Evidence for Private Portuguese firms*. Universidade do Porto, Faculdade de Economia.
- Mulford, C.W., & Comiskey, E.E. (2005). *The financial numbers game: detecting creative accounting practices*. John Wiley & Sons
- Othman, H.B., & Zeghal, D. (2006). A study of earnings-management motives in the Anglo-American and Euro-Continental accounting models: The Canadian and French cases. *The International Journal of Accounting*, 41(4), 406 – 435.
- Papanastasopoulos, G.A. (2014). Accounting accruals and stock returns: Evidence from European equity markets. *European Accounting Review*, 23(4), 729 – 768
- Parada, F.M., & Sanhueza, R.H. (2009). Contabilidad creativa en Chile: Una percepción de estudiantes y profesionistas. *Contaduría y Administración*, 229, 85–103.
- Remenić, B., Kenfelja, I., & Mijoć, I. (2018). AEM-Motives, Techniques and Possibilities of prevention. *Ekonomski Vjesnik*, 3(1), 193-199.
- Salome, E.N., Ifeanyi, O.M., Ezemoyih, C.M., & Echezonachi, O.E. (2012). *The effect of creative accounting on the job performance of accountants (auditors) in reporting financial statement in Nigeria*, in Kuwait Chapter of the Arabian Journal of Business and Management Review, 33, 1– 30.
- Saludas, J.M. (1999). El perfil fiscal de la contabilidad creativa: magia financiera o brujería contable?. *Partida Doble*, 9(98), 98 – 107.
- Santos, A., & Grateron, I. (2003). Contabilidade criativa e responsabilidade dos auditores. *Revista Contabilidade & Finanças*, 14(32), 7 – 22.
- Sari, N.Z.M., Afifah, N.N., Susanto, A., & Sueb, M. (2019). Quality Accounting Information Systems with 3 Important Factors in BUMN Bandung Indonesia. *Advances in Social Science, Education and Humanities Research*, 343(1), 93–96. <https://doi.org/10.2991/icas-19.2019.20>
- Schipper, K. (1989). Commentary on earnings management. *Accounting Horizons*, 3(4), 91 – 102.
- Scott, W.R. (2003). *Financial Accounting Theory*, 3ª Edição. Prentice Hall, Toronto,
- Sen, D.K., & Inanga, E.L. (2005). *Creative accounting in bangladesh and global perspectives*, Partners' Conference Program Book, Partners' Conference, Maastricht School of Management, The Netherlands (July 6-8), 75 – 87.
- Silva, A.F.D., Weffort, E.F.J., Flores, E.D.S., & Silva, G.P.D. (2014). Earnings management and economic crises in the Brazilian capital market. *Revista de Administração de Empresas*, 54(3), 268-283.
- Slovic, P., Fischhoff, B., & Lichtenstein, S. (1977). Behavioral decision theory. *Annual Review of Psychology*, 28(1), 1-39.
- Smith, T. (1992). *Accounting for growth*. Century Business, London.
- Srivastava, P., & Lognathan, M.S. (2016). Impact of accounting information for management decision making. *International Journal of Applied Research*, 2(5), 171–174.
- Stolowy, H., & Breton, G. (2004). Accounts manipulation: A literature review and proposed conceptual framework. *Review of Accounting and Finance*, 3(1), 5 – 92.
- Tassadaq, F., & Malik, Q.A. (2015). Creative accounting and financial reporting: Model development and empirical testing. *International Journal of Economics and Financial Issues*, 5(2), 544 – 551.
- Turner, L., Weickgenannt, A.B., & Copeland, M.K. (2020). *Accounting information systems: controls and processes*. John Wiley & Sons.
- Verrecchia, R.E. (1983). Discretionary disclosure. *Journal of Accounting and Economics*, 5(1), 179 – 194.
- Vladu, A.B., & Grosanu, A. (2011). Some insights regarding creative accounting in romanian accounting environment: Regulators, financial auditors and professional bodies opinion. *Annals of Faculty of Economics*, 1, 661 – 667.
- Yadav, B. (2014). Creative accounting: An empirical study from professional perspective. *International Journal of Management and Social Sciences Research*, 3(1), 38 – 53.

