Determining factors in modified audit reports: evidence from Portuguese municipalities

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\textbf{A B S T R A C T}

Factors influencing audit reports have been widely studied in the private sector, but few studies have sought to assess the reasons for modified reports or qualified opinions in the public sector. The objective of our work is to analyse the determining factors that influence municipalities’ audit reports. For this, we analysed three dimensions: factors related to the characteristics of the municipality, factors related to the characteristics of the auditor, and political factors. Our conclusions demonstrate that financial aspects, excluding debt, do not significantly influence an auditor’s opinion. However, the size of the audit firm and emphasis of matter in the audit report do affect the likelihood of a qualified opinion. Nevertheless, there is no relationship between differing political affiliations of the executive and deliberative bodies and the type of audit report or audit opinion. We found no relationship between a modified report and the studied variables.

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\textbf{R E S U M E N}

Los factores determinantes en la emisión de un informe de auditoría han sido ampliamente estudiados en el sector privado, pero pocos estudios han tratado de evaluar las causas para emitir un informe modificado u opinión calificada en el sector público. El objetivo de nuestro trabajo es analizar los factores determinantes en la emisión del informe de auditoría de los municipios. Para ello, se analizaron tres dimensiones: factores relacionados con las características del municipio; factores relacionados con las características del auditor; y factores políticos. Nuestras conclusiones nos permiten ver que las dimensiones financieras no influyen significativamente en la opinión del auditor, excepto por el endeudamiento; Sin embargo, el tamaño de la firma de auditoría, la existencia de énfasis influyen positivamente en la opinión del auditor. Pero, diferentes colores políticas entre la Asamblea Municipal y el Ayuntamiento no influencian la opinión del auditor ni el tipo de informe. Con respecto al vínculo entre un informe modificado y las variables estudiadas, no encontramos relación.

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1. Introduction

The study of auditing in the public sector has been neglected when compared with the private sector, which is surprising due to the impact, both economic and social, that the public sector has on countries’ economies (Habib, 2013; Moalla, 2017; Sultanoglu et al., 2018; Pollitt, 2006). This statement becomes even more relevant when we refer to municipalities (Paananen, 2016). In Portugal, municipalities’ main source of funding is state budget transfers, which in 2016 accounted for about 56% of total revenues.

Public sector auditing plays an important role in most European countries, as it encourages transparency in financial statements, reduces or eliminates abuse of power and promotes more efficient management of public resources. Demand for auditing in the public sector can be justified in the light of the agency theory, where citizens are seen as the principal and politicians as agents (Kurtenbach & Roberts, 1994; Moe, 1984), or through the theory of public choice in which the construction of a free-market counterpart is a strong and centralised state. The state faces contradictory pressures, either through organised groups, opposition politicians or elements of the state itself (Mueller, 1976; Boyne, 1997).

Studies addressing auditing and the public sector relate to fees, quality, contracting audit services, as well as the financial factors that determine changes in the audit report (Paananen, 2016; Collin et al., 2017; Axén et al., 2019). With the growing focus on public management and the adoption of accrual accounting, the opportunities to prepare discretionary financial information have increased, which may lead to results management. The motivations for doing so are diverse: achieving financial objectives, achieving social objectives in compliance with the rules of financial balance, or using financial statements as a political weapon (Gandhi et al., 2016). Auditing is seen as a barrier to the speculative use of financial information (Guarini, 2016). Political conflicts and competition between different political parties raise the need for monitoring and auditing. In local governments the City Council is responsible for implementing public policies that are decided by the Municipal Assembly and also for the preparation and fair presentation of the financial statements so that they reflect the policies and their results. The Municipal Assembly is responsible for monitoring and assessing the City Council management, as well as for appraising and voting on the financial statements.

Political competition means that both the opposition and government party have a vested interest in the financial information presented being relevant (Deis & Giroux, 1992; Giacomini, 2020). However, a political alignment between the Municipal Assembly and City Council can lead to less control over policies carried out by the executive body. Our paper seeks to explore whether there is a relationship between the type of audit report and the political alignment of the deliberative and executive bodies.

The study is relevant for various stakeholders. For auditors, it may be helpful in deciding whether or not to accept a client, as well as for audit planning, since it identifies the key characteristics of municipalities that determine auditor opinion and the issuance of a qualified audit report. For regulators, our empirical study provides evidence on the reliability of financial statements presented by municipalities. It allows financial information users, taxpayers and voters to identify the most decisive factors influencing auditor opinion, and assesses whether a political alignment between the executive and deliberative bodies produces more or less reliable financial information.

The research is organised as follows: first, we address the current Portuguese situation, describing the Portuguese municipalities and the audit context, auditors’ duties and how they are appointed according to Portuguese legislation. Secondly, we review the literature related to the importance of auditing in the public sector, focusing on agency theory and public choice theory. In this section we also review the literature related to earnings management in the public context. Thirdly, we formulate our study hypotheses and discuss the related literature. In the fourth section we explain our sample and the variables incorporated by the model and exploratory study. The fifth section is devoted to the presentation of results. Finally, we list the conclusions and limitations to our work.

2. Context: Portuguese municipalities and audit reports

2.1. Description of municipalities

Mainland Portugal and the islands (Madeira and Azores), with a population of 10.2 million inhabitants (INE, 2016), are divided into 308 municipalities. The average population per municipality is 33,000 inhabitants and the median is 14,000 inhabitants. Thus, in Portugal there are 24 municipalities considered large (>100 thousand inhabitants), 99 medium-sized municipalities (population between 20 thousand and 100 thousand inhabitants) and 185 small municipalities (<20 thousand inhabitants).

Municipalities’ main source of funding is state budget transfers, which in 2016 accounted for about 56% of total revenues. However, since 2014 we have witnessed an increase in the weight of own-source revenues in municipalities’ total figures. In 2014, own-source revenues represented 38.8%, while in 2016 they had already accounted for 40.5% of total revenues. Also, the percentage of municipalities whose own-source revenues exceed 50% increased from 71% to 87% from 2014 to 2016 (OCG, 2016).

In local governments, the City Council is responsible for implementing public policies decided by the Municipal Assembly and preparing the financial statements so that they reflect the policies and their results. The Municipal Assembly is responsible for monitoring and assessing the City Council management, as well as for appraising and voting on the financial statements. Municipal elections are held every four years in which the executive body and deliberative body are elected.

According to paragraph 2 of article 238 of the Constitution of the Portuguese Republic, the purpose of transfers from the State to local authorities is to ensure the fair distribution of public resources, in order to correct inequalities among the various municipalities, pursuing objectives of financial and vertical balance. In 2019 the total amount of municipal share in state taxes amounted to 2.6 billion Euros.

2.2. Auditors’ duties

The entry into force of Law No. 2/2007 of 15 January marked a turning point in terms of enhanced transparency in the municipalities’ accounts. In a way, it provided the municipalities with a sense of credibility, following several news reports and questions surrounding their management. This is, incidentally, a common denominator when we try to analyse the evolution of the audit, which attracts more attention and grows after media exposure.
This law introduced for the first time mandatory verification of annual accounts by an external auditor for municipalities and Municipality Associations holding capital in foundations or local business entities. Thus, the executive body is responsible for preparing the financial statements which, together with the audit report, must be sent to the deliberative body for assessment. This law was subsequently revised in 2013, and a new law was issued, Law No. 73/2013 of 3 September. In view of the previous law, it did not substantially alter auditors’ responsibilities.

2.3. Appointment and contracting of auditors

The Municipal Assembly is the deliberative body of the municipality, being assigned the powers of appraisal and supervision (article 24 of Law No. 73/2013 of 12 September), specifically 39 appraisal and inspection measures. Law No. 73/2013, of September 3, also establishes that it is the responsibility of the Municipal Assembly to appoint an auditor based on the executive body’s proposal. The auditors are selected from those registered on the “Ordem dos Revisores Oficiais de Contas” (OROC), the mandatory professional accountancy organisation for statutory auditors. They can be individuals or “sociedades de revisores oficiais de contas” (statutory audit firms), and there is no time restriction related to its mandate.

Auditors are selected according to the Public Procurement Code, with the aim of introducing greater rigour and speed in public procurement and the implementation of administrative contracts, taking into account the relevance of the contracted administrative activity as well as the need to control public expenditure. Depending on the amount concerned, auditors can be selected either directly or by considering various proposals. The choice may be made only with regard to price or taking into account technical factors.

In general, according to data published on the Base.gov portal, Portuguese municipalities selected auditors both directly and via prior consultation. In the case of direct selection, the municipality directly invites an auditor or an auditing firm of their choice to submit a proposal. The proposal may not exceed 5,000 Euros if it dispenses any procedural formalities or 20,000 Euros if not. In the case of the prior consultation procedure, the municipality directly invites at least three auditors or auditing firms to submit a proposal, choosing according to the criteria defined. As a rule, this will be the lowest price criterion. This procedure may be adopted as long as the services provided do not exceed 75,000 Euros.

When the base bid value exceeds 75,000 Euros, and the choice of the type of procedure depends on the contract value, the use of public tender, advertised in “Diário da República” and open to the market, becomes mandatory.

3. Theoretical framework

Berle & Means (1932), Ross (1973) and Jensen & Meckling (1976) highlighted the divorce between ownership and control, a situation which has created agency theory. One of the main assumptions of this theory is the conflict between principal and agent. Indeed, in financial theory it is assumed that the goal of shareholders is to maximise long-term wealth, and that agents, in turn, tend to maximise their interests, assuming selfish behaviour. Several studies have addressed earnings management, which has been defined as the managed use of financial information in order to mislead investors regarding the real financial situation of a company. This deception is achieved through alternative accounting choices as well as operating decisions.

Using this behavioural logic, the basic question is how do capital holders control a company’s management? Thus, auditing emerges as a function that looks after the interests of both the principal and the agent. The audit gives the principal an opinion on the adequacy of the financial statements, decreasing the imbalance of information that exists between principal and agent. For the agent, audit services assure the principal that the information disclosed by them is reliable.

Agency theory is also applicable to the public sector (Barber, 1983; Jensen, 2005), because citizens are in the principal position by entrusting their resources (taxes) to politicians operating as agents.

According to Streim (1994), agency relationships established in the public sector are more complex than those in the private sector. Indeed, the author points to the existence of three types of relationship that are established between agents and principals: between citizens and politicians, between the assembly and the executive body, and between the executive body and the central government. The first agency relationship applies because the cost that every citizen would have to bear to control the actions of politicians would be extremely high. The executive body must report to the assembly on budget execution and financial statements, with auditing being viewed as a means of ensuring that information is not biased and is free from material misstatement. Lastly, as the municipalities’ executive body is accountable to the central administration, we have yet another level of agency.

Nevertheless, since the primary goal of local governments is not earnings, but rather to provide services to citizens and balance expenditure and income, other theories have emerged. Public choice theory assumes that politicians and the government pursue their own interests by acting according to their selfish goals (Mueller, 1976). This theory focuses on two postulates: the self-interest axiom and the pressure for competition axiom (Boyne, 1997). Selfishness and the relentless pursuit of profit are the driving force behind markets. The theory of public choice understands that the behaviour of people in government positions is not altruistic, nor does it take into account the public interest, but is driven by selfish behaviour (Borges, 2001). Downs (1957) states that the actions of politicians are aimed at obtaining income, power and social visibility, and, ultimately, taking the fate of country into their own hands through the electoral process. Although politicians, on certain occasions, may serve the public interest, their intentions aim to fulfil their personal goals.

Pressures related to competition can redirect politicians towards serving the public interest. Competition in the field of public choice theory can be between different geographical dimensions and between different levels of local government.

Thus, earnings management in local government can be characterised in terms of political costs and contractual costs (Watts & Zimmerman, 1986). Local governments can use alternative accounting criteria to disguise poor financial performance, deficient management, insufficient funding of public services, avoid deficits and achieve their financial goals, thus creating a wide scope for earnings management practices.

In conflicting political relationships, especially during political campaigns, politicians try to inflict harm on each other to gain political advantage, and financial information can be used as a weapon for this purpose (Gandhi et al., 2016). In this context, financial information can be manipulated, overestimating results and transferring charges to the
next mandate. Likewise, re-elected politicians can use financial information to blame their predecessors for a poor financial situation (Guarini, 2016).

Several authors have studied earnings management in local government. Ferreira et al. (2013), analysing Portuguese municipalities, concluded that Portuguese politicians are motivated to manage results in order to present positive, or close to zero, results. Arcas & Martí (2016) found that English municipalities use abnormal accruals in order to present a reduced surplus or a lower deficit. Donatella et al. (2019), analysing Swedish municipalities, established a relationship between earnings management and audit fees, in which audit fees increased in line with increased earnings management. Cohen et al. (2019) state that the main reason for earnings management is the electoral cycle, as earnings management appears to be greater when the mayor is re-elected compared to during their first election, and that the pre-election period is conducive to earnings management. The impact that financial information has on the electorate was studied by Bradbury & Scott (2015), higher quality financial information combined with better financial performance contributes to political re-election and greater voter participation. Alt & Lassem (2006) reported that high levels of transparency lead to lower budget deficits, promote expenditure control and enable the allocation of financial responsibilities. According to Bradbury & Scott (2015), taxpayers and voters should know the reasons why qualified audit reports or modified audit reports are issued concerning institutions that are funded by public revenues.

Many authors have emphasised the importance of public sector reporting. According to Marques & Marques (2004), the main differences lie in the number of financial information users, since in the public sector they are in greater numbers, and the impact that financial information in the public sector has on society in general. Audits on public sector bodies are particularly important as their findings are communicative to the Portuguese Supreme Audit Institution. They are also seen as a means of defending citizens, as public managers may be tempted to tamper with financial information in order to avoid political disputes (Baylis & Greenwood, 2016). In turn, these managers see the audit as a seal of approval regarding financial management (Ward et al., 1994).

In accordance with Portuguese auditing standards, the auditor may issue a report with a qualified opinion or with an unqualified opinion. The definition of these types of opinion closely follows the international audit standards (ISA 700, ISA 705 and ISA 706). A qualified opinion is understood as one of the following types of opinion: (i) an opinion with disagreements (when the auditor concludes that misstatements, individually or in the aggregate, are material, but not pervasive, to the financial statements); (ii) an opinion with limitation of scope (when the auditor is unable to obtain sufficient appropriate audit evidence on which to base the opinion, concluding that the possible effects on the financial statements of undetected misstatements, if any, could be material but not pervasive); (iii) an adverse opinion (the auditor having obtained sufficient appropriate audit evidence, concludes that misstatements, individually or in the aggregate, are both material and pervasive); and a disclaimer opinion (the auditor is unable to obtain sufficient appropriate audit evidence on which to base the opinion, and the auditor concludes that the possible effects on the financial statements of undetected misstatements, if any, could be both material and pervasive).

Audit reports may be modified or not. They are considered modified when they include qualification and/or emphasis of matter (a paragraph included in the auditor's report that refers to a matter appropriately presented or disclosed in the financial statements that, in the auditor's judgement, is of such importance that it is fundamental to users' understanding of the financial statements). Audit reports without modifications are also referred as clean reports, which means that they do not have any qualification or emphasis of matter. The consequences of modified opinions have been the subject of multiple studies. According to Sánchez-Ballesta & García-Meca (2005), a qualified opinion has a negative impact on financial information users, influencing electoral behaviour, since the economic effects of public policies are reflected in the financial information (Brusca & Montesinos, 2006). Sun et al., (2006) found little impact of qualified audit opinions on the ability to borrow bank loans when local or central governments have a strong influence on companies. Edmonds et al. (2020), point out that qualified audit opinions have an impact on municipal market bonds since investors value the information content of an audit report, penalising counties and local governments with qualified/adverse audit opinions.

4. Hypotheses

Our study focuses on a three-dimensional analysis that may influence the type of report issued by the auditor: (a) municipality characteristics (b) auditor characteristics; (c) political governance of the municipality.

The variables included in our study are based on suggestions from previous studies, with the addition of a new dimension related to the municipality executive and deliberative bodies.

Our hypotheses are developed by taking into account the three dimensions listed above.

Study hypothesis 1: municipality characteristics

4.1. Municipality size

Several studies analyse the relationship between the size of entities and the issuance of qualified opinions, using total assets and the number of inhabitants as dimension assessment measures (Giroux & Jones, 2007; DeFond & Lennox, 2011, Reichelt & Wang, 2010). Conclusions are not consistent. According to Segura & Molina (2001) and Paananen (2016),...
larger entities are more likely to obtain qualified opinions. However, Gallizo & Saladrigues (2016), Habib (2013), Vermeer et al. (2013) and DeFond & Lennox (2011) conclude that smaller entities have a greater likelihood of having qualified opinions. However, the study by Sánchez-Ballesta & García-Meca (2005) found no relationship between the size of the audited entity and the type of audit report. Regarding Portuguese municipalities, Rei (2015) concluded that the size of the municipality was not a differentiating factor in the quality of financial information.

4.2 Leverage

Previous studies (Yasar et al., 2015; Habib, 2013; Vermeer et al. 2013; DeFond & Lennox, 2011) found that there is a positive relationship between the leverage of an entity and the issuance of a qualified opinion. Paananen (2016) concluded that leverage does not increase the likelihood of obtaining a modified audit report; however, this may be due to the fact that the Joint Municipal Authorities analysed by the author are not heavily indebted entities.

Other studies, such as Alt & Lassem (2006), analyse debt and transparency, concluding that the higher the leverage, the lower the transparency.

4.3 Liquidity

Liquidity tells us how well an organisation is able to meet its short-term commitments. A liquidity of less than 1 is a risk indicator as its short-term assets are insufficient to meet short-term liabilities, jeopardising short-term operations and even business continuity. Using data from several studies that analysed the relationship between liquidity and changes in the audit report, it is possible to conclude that there is a relationship between liquidity and changes in the audit report (Sánchez-Ballesta & García-Meca, 2005; Spathis, 2003; Yasar et al., 2015; Chen et al., 2001). On the other hand, Paananen (2016) detected no relationship between weak liquidity and the type of report issued by the auditor.

4.4 Debt

Debt demonstrates the entity’s dependence on foreign capital. Several studies have analysed the relationship between the level of debt and the probability of the audit report having qualifications (Jiang et al., 2010; Habib, 2013; Vermeer et al., 2013; DeFond & Lennox, 2011). Also, Sánchez-Ballesta & García-Meca (2005) and Ozcan (2016) concluded that entities with higher long-term debt are more likely to receive a qualified opinion. On the other hand, Segura & Molina (2001) concluded that there is no relationship between the level of debt and qualified opinions.

4.5 Profitability

Chan et al. (2006) state that companies with lower financial performance are more likely to manage earnings upwards, increasing the likelihood of receiving a qualified opinion. Profitability is an indicator that can assess a municipality’s operational performance, which is particularly relevant when we think about what an efficient use of resources could be. The literature points out that profitability correlates with the issuance of a qualified opinion (Krishnan & Sengupta, 2011).

To analyse profitability, we use return on equity (ROE), widely applied in companies. Segura & Molina (2001) found no relationship between profitability and modified audit opinions. However, other studies have come to different conclusions. Özcan (2016), Yasar et al. (2015) and Sánchez-Ballesta & García-Meca (2005) concluded that there is a relationship between low profitability and the issue of a qualified opinion.

When applying the ROE to the municipalities we have to take into consideration that the municipalities are not profit-oriented (Paananen, 2016), but directed towards ensuring the needs of the population are met by managing their resources in accordance with the rules of economy, efficiency and effectiveness.

4.6. Net income

The literature suggests that an entity with negative results is more likely to be issued with a modified audit opinion (Gallizo & Saladrigues, 2016; Spathis 2003; Segura & Molina, 2001; Lennox, 1999; and Hopwood et al., 1989). Although municipalities do not aim at profit, we believe it is in their best interest to verify that the issuance of modified audit reports and qualified opinions may be related to the municipal outcome.

Study hypothesis 2: auditor characteristics

4.7. Auditor firm size

Several studies have sought to assess whether there is a relationship between the size of the audit firm and the audit report type (Gallizo & Saladrigues, 2016; Paananen, 2016; Habib, 2013, Vermeer et al., 2013; and DeFond & Lennox, 2011, Jiang et al., 2010; Reichelt & Wang, 2010). Gallizo & Saladrigues (2016) concluded that entities audited by smaller auditors were more likely to obtain qualified audit opinions, while Paananen (2016) concludes that the larger the audit firm is, the more likely it is to issue an audit report with qualifications. Knechel & Vanstraelen (2007) and Vermeer et al. (2013) point out that this is because large audit firms have more to lose in reputational terms.

In Portugal the municipalities’ choice of auditor is made based on price, as a general rule; that is, the auditor with the lowest fees wins (Marques & Pinto, 2019). This fact led to the so-called big four moving away from this market, leaving its domain to small international and national audit firms. Thus, a comparison between the big four and the other audit firms in our study does not seem appropriate, since only one municipality in our sample was audited by a big four company. We chose to follow a size criterion appropriate to Portugal based on the study of Almeida & Silva (2015), where the 10 largest audit firms operating in Portugal were identified.

4.8. Audit report lag

The audit report lag is the time difference between the end of the company’s balance sheet date and the date of the auditor’s report. In Portuguese municipalities the financial statements must be approved by the Municipal Assembly by the end of April. The financial statements, prepared by the City Council and forwarded to Municipal Assembly, should be accompanied by the audit report. It is in the interest of both the auditors and the municipalities for audit reports to be issued in a timely manner, as this is an indicator of efficiency and competence. Auditor opinion has an effect on auditor delay. Audit reports not issued quickly may indicate financial
or audit problems or disagreements between auditor and client (McLelland & Giroux, 2000). These authors demonstrate that the largest entities present audit reports within a longer timeframe compared to the financial statements reference data, and that audit complexity also increases this period. A long audit report lag is also associated with audit qualifications, since it involves an extension of audit scope, negotiations with the client and consultation with a more senior audit partner (Al-Ajmi, 2008; Knechel & Vanstraelen, 2007, Vermeer et al., 2013). On the other hand, Iskandar (2010) stated that auditor opinion does not affect audit delay, possibly because the opinion obtained by the company does not affect the process of auditing financial statements.

**Study hypothesis 3:** political governance of the municipality influencing the audit report

### 4.9. Political governance

Local authority management involves different issues from those in private management, materialising in a political dimension of management, characterised by the fact that the executive and deliberative bodies are subject to suffrage, meaning there is a check and balance. In an environment of political competition, both the ruling party and opposition parties have an interest in the production of relevant financial information, leading the latter to strengthen their monitoring effort (Deis & Giroux, 1992; Benito et al., 2019). Results transparency is important for politicians since they are linked to the political agenda. On the other hand, if there is alignment between the executive deliberative bodies, the supervisory function of the deliberative body may be less assertive. Johnsen et al. (2004) state that auditor contracting may be influenced by the political dimension. When political power is divided by various parties, the political environment becomes more competitive, creating more ambiguity and making policies harder to implement (Johansson & Silverbo, 2009). As a result, discussions on financial matters become more intense (Cohen & Leventis, 2012).

The different political parties, with their different ideologies, seek to meet the expectations of their voters (Tagesson et al., 2015). Political majority is also a factor to take into consideration, since political parties want to be re-elected for the following mandate, which may be a reason to influence financial statements (Benito et al., 2022). Politicians want to show their citizens that they have worked efficiently. The information they want the citizen to receive may depend on which party holds the majority, as different parties have diverse moral and political messages.

Thus, we want to know if municipalities where the Municipal Assembly and City Council are not politically aligned are more likely to obtain modified audit reports and or qualified opinions, since political scrutiny tends to be greater when different political parties are in the two major municipality bodies.

### 5. Methodology

#### 5.1. Sample

In mainland Portugal and the islands there are 308 municipalities. According to Law 73/2013, of September 3, no. 2 of article 79, the municipalities, for transparency reasons, are required to disclose document checks and balances, namely "management reports, balance sheets and income statements, including consolidated statements, budget execution statements and financial statements disclosures, for the last two years". Via the Portuguese municipalities’ websites, we verified that everyone complied with this obligation; however, not all municipalities present the auditor report. In the period under review in our study, 2014-2016, the first three years in which all municipalities are required to be subject to external audit, we consulted 308 websites, collected 924 accountability documents and 642 external auditor reports, either directly through the website, or via email contacts for the municipalities. 93 municipalities were excluded as we were unable to obtain the auditor report. Given our population, we collected a sample of 69.4%. Subsequently, we collected political information regarding the executive and deliberative bodies through the National Electoral Commission website, assessing their respective majorities.

Sample collection procedures are described in **Table 1**.

#### Table 1. Sample Collection Procedures

<table>
<thead>
<tr>
<th>Description</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nº of Portuguese municipalities (2014 to 2016)</td>
<td>924</td>
</tr>
<tr>
<td>(-) Municipalities without audit report</td>
<td>(279)</td>
</tr>
<tr>
<td>Final sample of municipalities considered</td>
<td>645</td>
</tr>
</tbody>
</table>

#### 5.2. Variables

To test the hypotheses formulated we used the following dependent variables: first, for a qualified opinion (QUALIFIED), through disagreements and/or limitation of scope, adverse opinion or disclaimer of opinion, the variable has a value of 0. An unqualified opinion defaults to 1. Secondly if the audit report is modified (MODIFIED), through the inclusion of emphasis of matter, the variable is coded as 0. If the audit report does not include any emphasis of matter, it receives a value of 1.

We also use several independent and control variables in our model. The dimension variable (SIZE), measured by assets, has been widely used in studies covering both public and private sectors. (Vermeer et al., 2013; Cohen & Leventis, 2012 and Paananen, 2016). To measure this variable in our model we used the number of inhabitants in each municipality, and their classification into small, medium and large according to the following classification criteria: small municipalities, population less than or equal to 20 thousand inhabitants; medium municipalities, population greater than 20 thousand inhabitants and less than or equal to 100 thousand inhabitants; and large municipalities, those with a population of over 100,000 inhabitants. If the municipality is classified as small, it receives the code 0, if it is classified as medium or large, the value of 1 is assigned.

The liquidity ratio (LIQUID) allows us to gauge whether an organisation has the capacity to meet its short-term obligations. Poor liquidity can jeopardise short-term operations and therefore their ability to continue operating. The liquidity ratio measures current assets vs current liabilities.

We also use the following variables: debt (DEBT), measured by the total of borrowed capitals on the total assets; Leverage (LEV), measured through operating results over current results; and ROE calculated through the income for the year on own funds.

Finally, we use the variable result of the fiscal year (LOSS), classifying it as 1 if the result is positive and 0 if it is negative. We use the variable dummy BIG10. Several studies emphasise that there is a positive relationship between the size of the audit firm and a modified audit report. That is, the larger auditing firms place greater importance on their reputation, therefore tend to issue more reserved audit reports com-
pared to medium and small audit firms (Jiang et al., 2010; Vermeer et al., 2013). As in Portugal only one municipality is audited by a big four firm, we used the study by Almeida & Silva (2015) which identified the ten largest audit firms in Portugal. Thus, we ranked as 1 the auditing companies that are part of the ten largest auditing companies operating in Portugal and the remainder as 0. The time elapsing between the date of issue of the audit report and the date of the financial statements is measured in number of days (Vermeer et al., 2013) and this variable was called LAG.

Regarding political factors, the composition of the deliberative body and the executive body may influence the type of report issued. Haraldsson & Tagesson (2014) report that minority governments imply greater political competition. Sánchez-Ballesta & García-Meca (2005) state that corporate governance characteristics and the legal system of investor protection may also influence the role of statutory auditors and the demand for audit quality. Regarding political factors we considered three situations: if the City Council (MAYOR) or the Municipal Assembly (COUNCIL) have absolute majority, we code it as 1. If they have no absolute majority, 0. If there is political alignment between the City Council and the Municipal Assembly (MAY=COUN), that is, if they have the same political party, consider 1, otherwise 0.

6. Results

We used logistic regression as a predictive analysis. It is used to describe data and to explain the relationship between one dependent binary variable and one or more nominal, ordinal, interval or ratio-level independent variables using SPSS 26.

6.1. Descriptive statistics

Of the 645 audit reports collected, the auditor’s opinion had been modified in 73% and only 27% contained unqualified opinions, 68% audit reports were modified, containing emphasis, 32% contained no emphasis, and 81% of audit reports expressed qualified opinions and emphasis.

In terms of size, 47% of municipalities are large and medium-sized (38% medium and 9% large). Most municipalities have positive results (64%), although in public administration the main objective is not to obtain profits, but to meet the collective needs of the population and strive for efficient, economic and effective management of their resources.

In financial terms we find that on average current assets are higher than current liabilities (LIQUID) at 3.33, the highest being 157.64 and the lowest being 0.03. ROE averages 0.01 and leverage 0.26. The debt ratio averages 19%, with a maximum of 169% and a minimum of 1%.

Audit report lag average was 103.53 days, that is, audit reports on average are issued in April. The quickest was issued 33 days after the year end and the last one 186 days after the year end. Most audit reports are issued between February and April within the timeframe provided by law.

Regarding auditors’ size, 14% of municipalities are audited by the 10 largest audit firms operating in Portugal, only one of which is audited by a so-called big four; therefore, the overwhelming majority of municipalities are audited by small auditors.

At the political component level, 83% of municipalities have an absolute majority in the executive body and 59% in the deliberative body. In 93% of the municipalities, the political force that holds the majority in the executive body also has the majority in the deliberative body.

<table>
<thead>
<tr>
<th>Table 2. Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUALIFIED</td>
</tr>
<tr>
<td>MODIFIED</td>
</tr>
<tr>
<td>SIZE</td>
</tr>
<tr>
<td>LAG</td>
</tr>
<tr>
<td>LIQUID</td>
</tr>
<tr>
<td>DEBT</td>
</tr>
<tr>
<td>ROE</td>
</tr>
<tr>
<td>LOSS</td>
</tr>
<tr>
<td>BIG10</td>
</tr>
<tr>
<td>MAY</td>
</tr>
<tr>
<td>COUN</td>
</tr>
<tr>
<td>MAY=COUN</td>
</tr>
</tbody>
</table>

6.2. Exploratory study

As there are several variables, we conducted a preliminary study to assess the single influence on dependent variables. We performed correlation analysis and chi-square tests, as appropriate, to determine the association between variables. For financial variables we observed that the unique significant variable for the qualified opinion variable is DEBT (p<0.001) and for the modified opinion it is LIQUID (p=0.03). These two variables are also significant when considering LAG as dependent DEBT (p<0.001) and LIQUID (p=0.001) respectively, however it does not have a significant relationship with any other variable.

For non-financial variables, QUALIFIED is significantly associated with COUNCIL (p=0.009) and BIG10 (p<0.001), while MODIFIED does not have any other association.

As result of this study, we have decided to assume the following research questions:

H1) Liquidity ratio is not influential with regard to obtaining a qualified opinion or a modified audit report;

H2) Debt ratio is not influential with regard to obtaining a qualified opinion or a modified audit report;

H3) Audit firm size is not influential with regard to obtaining a qualified opinion or a modified audit report;

H4) Audit report lag is not influential with regard to obtaining a qualified opinion or a modified audit report;

H5) Absolute majority in the Municipal Assembly is not influential with regard to obtaining a qualified opinion or a modified audit report.

The logistic regression analysis used a generalised linear model with binary logistic response, first using QUALIFIED as dependent variable and SIZE, LEV, ROE, LOSS, MAY, MAY=COUN as control variables, followed by a second model with MODIFIED as dependent, setting 0.1 as the level of significance.

6.3. Analysis

6.3.1. Qualified opinion

In the following tables we present the result of this analysis, as well as the respective correlation tables, dissecting the relevant results for our research.

In the variables presented, the size of the audit firm is seen as significant (BIG10) and the degree of debt (DEBT) is also significant in relation to the modified reports (MODIFIED). That is, if there is a qualified opinion, there is a strong likelihood that it is also associated with a modified audit report.

1Only expressed null statistical hypothesis (the alternative being the influential statement)
Our research shows that there was no relationship between most of the financial variables analysed and the qualified opinion, a fact that is also supported by our study. We don’t reject, the hypotheses H1. We also have data that strongly support the rejection of hypothesis H2, showing the higher the DEBT of the municipality, the greater the likelihood of obtaining a qualified opinion. So, from the municipal dimension, only DEBT is significantly related to modified opinions, so modified opinions are more usual in municipalities that presented higher level of debt.

The odds ratio shows that there is an increased probability of a qualified opinion in the presence of a modified opinion and a higher level of DEBT.

Our hypothesis regarding the influence of the size of the audit firm (BIG 10) on the auditor’s opinion (H3), was supported by the results of our study. It should be noted that, as regards the size of the audit firm, we found that most municipalities are audited by smaller companies. In this case, it was not possible to make a study using as criteria the so-called big four (used in homologous studies), because there was no sample for that, but we still managed to make a differentiation in terms of size. Previous studies have yielded contradictory results, but in the case of audits of Portuguese municipalities’ accounts there is now evidence to prove the relationship between the size of the audit firm and the opinion delivered.

This study found no significant relationship between the hypothesis related to the issuance term of the audit report (H4) and the qualified opinion. Municipalities are required to have the financial documents approved and to send them to the competent authorities within the legal timeframe, and from the data we extracted, the deadline for issuing the audit report is met by the overwhelming majority of municipalities. The window for issuing the audit report is between February and July.

As for the majority variable in the Municipal Assembly, we have a significance level of less than 0.05 (more specifically 0.034), so we are able to reject hypothesis H5, pointing out that municipalities without an absolute majority in the Municipal Assembly are more likely to get a qualified audit opinion. The results demonstrate the importance of a majority in the Municipal Assembly may have with regard to the auditor’s opinion, as this is the supervisory body of the City Council, where the audit report is subject to political scrutiny and greater public exposure. The competence of the Municipal Assembly to appoint the auditor may be relevant here, as it is in this body that the auditor’s work and opinion are most scrutinised and possibly disseminated.

Predictably, in a Municipal Assembly with a majority, the management report, financial statements and audit report will have a result consistent with this majority, being subject to less discussion.

6.3.2. Modified audit report

In a second part of the logistic regression analysis, we considered the variable modified audit report, also defining 0.1 as the level of significance. Table 4 shows the results of this analysis.

### Table 4. Composición de la muestra

<table>
<thead>
<tr>
<th>B</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUALIFIED</td>
<td>0.834</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>LIQUID</td>
<td>0.283</td>
<td>0.204</td>
</tr>
<tr>
<td>DEBT</td>
<td>0.221</td>
<td>0.719</td>
</tr>
<tr>
<td>BIG10</td>
<td>0.007</td>
<td>0.978</td>
</tr>
<tr>
<td>LAG</td>
<td>0.002</td>
<td>0.709</td>
</tr>
<tr>
<td>COUNCIL</td>
<td>0.109</td>
<td>0.635</td>
</tr>
</tbody>
</table>

The results demonstrate significant differences related to the determinants of modified audit reports and qualified opinions. In the case of modified audit reports, we only found support to reject H1, meaning that LIQUID has an influential role in issuing modified opinions. There is no relationship between the variables studied and the existence of modified audit reports for any of the hypotheses put forward.

Here, we are only able to corroborate the relationship that exists between modified audit reports and qualified opinions.

### Table 3. Logistic Regression Analysis - Qualified opinion

<table>
<thead>
<tr>
<th>B</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MODIFIED</td>
<td>0.852</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>LIQUID</td>
<td>0.006</td>
<td>0.588</td>
</tr>
<tr>
<td>DEBT</td>
<td>3.076</td>
<td>0.001</td>
</tr>
<tr>
<td>BIG10</td>
<td>-1.665</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>LAG</td>
<td>0.002</td>
<td>0.733</td>
</tr>
<tr>
<td>COUNCIL</td>
<td>0.408</td>
<td>0.051</td>
</tr>
</tbody>
</table>

Regression estimates, p-value and odds ratios for the predictors Controlled for SIZE, LEV, ROE, LOS, MAYOR, MAY=COUNCIL

7. Conclusions

Our research provides evidence on the municipal dimension, audit characteristics and political factors that influence the audit report type and the auditor’s opinion. Portuguese data reinforced the conclusions of previous studies that focused on public entities as well as private companies. Our study covered a period of three years, the first three years in which all Portuguese municipalities were audited and our sample of 69.4%, very representative of the population, strengthens our results and our conclusions. Using those studies, we formulated several hypotheses regarding municipal characteristics, features of auditors and, for the first time, political aspects regarding Municipal Assembly and City Council political power and political alignment. Our hypotheses were statistically tested through a logistic regression, allowing us to draw the conclusions.

Regarding the municipal dimensions our results fell short. Based on private company studies and other public sector studies, we expected that financial indicators would have more influence in the audit report and in the auditor opinion. This is probably due to the fact that for municipalities, financial ratios are not as relevant as they are in the private sector, since the aim of municipalities is to achieve population satisfaction instead of financial performance. We found that only debt (DEBT) is statistically significant in the auditor’s opinion, the same conclusion reached by Jiang et al. (2010), Habib (2013); Vermeer et al. (2013), DeFond & Lennox (2011), Sánchez-Ballesta & García-Meca (2005) and Özcan (2016). Our results show that the size of the audit firm (BIG10) affects the likelihood of a qualified opinion, confirming Knechel & Vanstraelen (2007), Vermeer et al. (2013) and Paananen (2016) studies.

We also note the existence of a high significance between the auditor opinion and modified audit report. Contrary to our expectations, we found that when the executive and the deliberative body are not from the same political family, there is no increase in qualified opinions. This can be explained by the fact that auditors carry out the same level of diligence.
whether or not the financial statements, and the auditors’ report, are scrutinised by deliberative bodies aligned with the executive body. Or, due to the fact that the overwhelming majority of municipal councils have limited resources, councillors have little to no administrative support, and are generally incapable of effectively fulfilling their supervisory function. So in reality, councils are not the powerful supervisory bodies the law intended them to be.

We did not detect statistically significant relationships between the variables studied and the modified audit report. This study has some limitations: first, despite the legal requirement for municipalities to make audit reports available on their websites, some do not, nor responded to our requests to submit this report, making it impossible to analyse the entire population. Our research did not cover aspects related to the internal organisation of the municipalities, such as the existence of qualified human resources in the auditing areas and the existence and maturity of an autonomous internal audit structure. Furthermore, we did not consider the number of qualifications and their typology. Finally, these data are valid only for Portugal, which has a strong autarchic bias and a very unique organisation.

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Conflict of interests

The authors declare no conflict of interests.

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