

# **The Usefulness of Financial Reporting for Internal Decision-making in Portuguese Municipalities**

## **Abstract**

The purpose of this paper is to analyse the perception of internal users regarding the usefulness of municipal financial reporting in the context of decision-making in Portuguese Local Administration. This research is quantitative and positive, based on a cross-section analysis through online application of a questionnaire to decision-makers (politicians and technicians) of the 308 Portuguese municipalities. The approach is based on the information usefulness paradigm.

Results indicate a high usefulness for decision-making of the municipal financial reporting, in its current form and content. However, this usefulness would increase if information, other than what is mandatory, were introduced. In general, the two different groups of decision-makers, politicians and technicians, behave somewhat differently, regarding the usefulness financial reporting holds for them. Technical decision-makers consider it of greater value. There is no statistical evidence showing that there is a link between the training area and professional experience of the internal decision-makers and the usefulness of municipal financial reporting. Both types of users show a preference for the information set within the budgetary accounts, although accrual-based information also proved to be of very high value.

This study has important repercussions on internal decision-makers concerning the usefulness of municipal financial reporting. Particularly, the general approach towards reporting usefulness could become a solid work basis for the regulatory bodies to enhance the current reporting model in the light of its suitability for internal decision-making.

**Keywords:** Financial Reporting; Usefulness; Internal Decision-making; Municipalities.

## **1. Introduction**

During the past decades, many countries have undertaken significant reforms in Public Accounting and, therefore, in the financial reporting of information by public entities. The new accounting systems responded not only to the legitimacy, lawfulness and compliance with regulations, through budgetary cash-based information, but also to the availability of information concerning the efficient use and supply of public resources. Among other guidelines, the accounting information system in the public sector has been directed at the dissemination of useful and suitable information, allowing its users to assess and make decisions in a more rational and logical way (Lee, 2008). The reforms introduced in the Public Sector Accounting aim at improving the financial reporting for the decision-makers and for accountability purposes in general.

The new developments in public management and accounting were also felt at the Portuguese accounting system, including the Local Administration. The overall reform process in the accounting system of the public sector took its first steps in Portugal in the 1990s, with what became known as the Reform of State Financial Administration. Following this reform agenda, the Official Local Government Accounting Plan (POCAL – Plano Oficial de Contabilidade das Autarquias Locais) was approved in 1999, which embodied the starting point for the local administration management of new instruments helpful in the decision-making process.

Ten years on since the publication of the (POCAL), the adoption of the accounting system under this legislative framework, whose main purpose is to support management, has not been empirically studied yet, namely in respect to the usefulness of financial reporting produced for the decision-making. Despite the theoretical intentions set in the new Local Government accounting system, one might question whether the current reporting model of the financial reporting is actually adequate to reality, particularly if the financial reporting prepared and disseminated in the scope of POCAL by Portuguese municipalities is, in fact, useful for the decision-making.

It is under this framework that this study is developed, aiming at analysing the users' perceptions concerning the usefulness of municipal financial reporting within the internal decision-making. More specifically, this study intends to answer the following questions:

- (1) Which accounting statements are more useful for internal decision-making?*
- (2) What is the use of accrual basis information for internal decision-making?*
- (3) Which type of non-mandatory information is revealed as useful for internal decision-making?*
- (4) What is the relationship between the respondents and the usefulness they attribute to municipal financial reporting?*

Internal users were empirically considered since they have undertaken a leading role in the use of financial reporting by the Local Government accounting, with the introduction of the New Public Management (NPM) principles. Following the particular emphasis on the decision-making and on the accountability on the part of executives, internal users were considered one of the main users of the financial reporting regarding decision-making, together with the external users that use it predominantly for accountability.

The present study is structured into four sections, including this introduction. The second and third sections focus on the review of research that begins with an approach to the NPM and to the new financial information needs, in accordance with the Public Sector Accounting reforms and referring in particular to the Portuguese context; further on, studies on the usefulness of financial reporting in government entities are mentioned. In the fourth section, the empirical study is carried out, describing and defining the objectives and the research questions, the methodology, the hypotheses, the information collection instrument, the population, the method of collecting the information, and the sample. The last two points of this section combine the results through a descriptive analysis and then through the hypotheses tests. The paper conclusions drawn from this research as well as its limitations are set out in the final section.

## **2. New Public Management, information needs and Public Sector Accounting reforms**

During the last three decades, wide-ranging reforms in the public sector of several countries have been carried out inspired by the NPM concepts. The NPM concentrates on reducing the differences between the public and private sectors, aligning management practices (Hood, 1995; Lapsley, 2009) and highlighting the accountability process in the public sector to take greater responsibility for outcomes and results (Hood, 1995).

Within the scope of Public Sector Accounting, the NPM movement had deep effects on the accounting practices (Hood, 1995). Focusing on accounting's key role, NPM calls for a reform model that gives preference to the measurements and to the results (Lapsley, 1999,

2009; Hyndman & Connolly, 2011). As the traditional accountability process prevailing until then in the public sector, financial and legal accountability, revealed to be inadequate to measure the ruling entities, governing bodies and public managers, a new accountability arose, named management accountability (Guthrie, 1998; Mack, 2004). Moreover, the growing autonomy of public sector leaders regarding decision-making demanded another type of information, besides the information prepared on a cash basis. The budgetary cash-based accounting system was, therefore, considered insufficient to keep up with the change in the management information needs, namely by describing inaccurately the economic and financial situation of public organisations, and by not enabling adequate and useful information in the control process, in planning and in performance assessment (Lapsley, 1999).

Given the changes which have since occurred in public management, the accounting systems of Public Administration entities were unable to meet the current demands for information, setting new objectives that led to a change in the conceptual and methodological structure. New accounting instruments were hence introduced in the public sector, namely the accrual basis in the outset of financial statements, complementing the traditional cash basis control and commitments.

International literature signposts that the introduction of the accrual accounting information systems represents one of the most important guidelines in the Public Sector Accounting reform in the last decades (Guthrie, 1998; Van der Hoek, 2005; Hyndman & Connolly, 2011). According to this literature, among the key attributes of the new product, highlighting goes to the main positive aspects resulting from the implementation of accrual accounting, explicitly: useful information made available for the decision-making and the provision of additional information that enhances transparency, provision of responsibilities and the assessment of the public entities' performance to the benefit of the users.

However, several authors have been questioning the use of the accrual accounting in the public sector, not only because of both of the theoretical and practical aspects, but also due to its consequences (Christiaens, 1999; Guthrie et al., 1999; Hyndman & Connolly, 2011). The particular nature of public entities and the heterogeneity of their activities represent the most common reasons.

The study of accrual-based information is controversial and discussed in numerous international researches, namely its usefulness for the decision-making. Several authors, for instance Ouda (2007), consider the implementation of the accrual accounting and, therefore, the execution of the International Public Sector Accounting Standards – IPSASs, a radical

innovation to the Public Sector Accounting systems that will allow, among other aspects, the development of the accounting information system towards a greater usefulness.

Public Sector Accounting reforms has been, thus, grounded on the change of an accounting system which provides little information towards a system that discloses more adequate and wide-reaching information over the public resources management, catering for an improved economic and financial control on the government activities. This approach seeks to provide a more informative and useful accounting for the decision-making and responsibilities (Lüder, 1992). This accounts for progress in the Public Sector Accounting regarding the usefulness paradigm, providing more complete information about the assets, liabilities, income, expenses, property and change (Ouda, 2007), aiming at the most accurate image at the management level (Lüder, 1992).

At the international level, the professional organisations' guidelines (e.g., Governmental Accounting Standards Board – GASB e International Public Sector Accounting Standards Board – IPSASB) have encouraged the Public Sector Accounting reforms, e.g. on the implementation of the accrual accounting and on the improvement of reporting of financial information of the public sector entities, under the purpose of promoting timely and useful information for the decision-making and control (Lapsley, 1999). According to the Conceptual Framework Exposure Draft 1 of IPSASB (2010), the goal of the financial reporting of the public sector entities is: *'to provide useful information to the users, whether for accountability purposes or for supporting decisions regarding allocation of resources, political and social decisions.'* (IPSASB: CF-ED 1, 2010:§1.10).

In this changing context, within the NPM and following the example of several countries, reforms have been carried out in Portuguese public sector's accounting systems over the last years. These reforms devised, among others, a new model for a more wide-reaching and informative financial reporting. With particular reference to the Portuguese Local Administration, legislation was approved to respond to the current needs of the users of financial reporting (e.g. the needs of the Municipal Bodies' management). The Law of Public Accounting<sup>1</sup> launched the most recent reform to the Portuguese public accounting, subsequently regulated by the setting of basic conditions for its application<sup>2</sup>. However, the approval of the Official Public Accounting Plan embodies the most important stage of this reform (POCP – Plano Oficial de Contabilidade Pública)<sup>3</sup>. Such plan ensures that the Bodies

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<sup>1</sup> Law 8/90, February 20.

<sup>2</sup> Decree-Law 155/92, July 28.

<sup>3</sup> Decree-Law 232/97, September 3.

of the central, regional and local administration use an integrated accounting system (budget, property and costs).

The Local Government accounting reform in Portugal resulted in the publication of the Official Local Government Accounting Plan in 1999<sup>4</sup>, playing a crucial role in the preparation and disclosure of backup information for the decision-making and internal control by the Local Government leaders.

More generally, with the approval of the POCAL timely, useful and trustworthy information would be available to internal decision-makers, among others, and would allow more control and transparency in the spending of the public financial resources (increasingly depleted), to further maximise its efficiency, efficacy and economy. Additionally, the integration of the budgetary accounting with the financial and costs accountings meets the needs of improving the financial reporting of Local Government, crucial for the decision-making in the Local Government Administration. The financial reporting within POCAL was consequently extended, displaying not only information on the economic, financial and patrimonial situation (accrual basis), but also on the budgetary situation (on a cash basis)

To summarize, changes to the management models within NPM caused new informative needs that devised, on a global scale, strong reforms on Public Sector Accounting and on its financial reporting. Increasingly, public entities leaders need more useful and timely information for the most adequate decision-making. Therefore, the paradigm of information users and their necessities play a crucial role in explaining the innovations carried out on accounting systems and on financial reporting.

This usefulness approach is hence the central theoretical bedrock of this study and shall be taken into account in the empirical analysis on the usefulness of financial reporting of Portuguese municipalities.

### **3. The usefulness of financial reporting within the government entities: focus on Local Government**

According to international literature, work on the usefulness of financial reporting produced and released by the public entities is substantially reduced (Hay & Antonio, 1990; Daniels & Daniels, 1991; Collins et al., 1991; Brusca, 1997; Tayib et al., 1999). More specifically, literature focused on the usefulness of financial reporting for management purposes, including decision-making and control within the Local Government organisations,

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<sup>4</sup> Decree-Law 54-A/99, February 22.

is particularly poor (Mack, 2004; Yamamoto, 2008; Grossi & Reichard, 2009; Cohen, 2009; Kober et al., 2010; Andriani et al., 2010).

After almost three decades of the NPM reforms, during which the Public management model has been severely criticised, the new financial information still does not totally fulfil the needs of its users (Hay & Antonio, 1990; Daniels & Daniels, 1991; Brusca, 1997; Mack, 2004; Mack & Ryan, 2006). Some authors have studied the information needs released in the public entities financial reporting, of both internal and external users (Jones et al., 1985; Hay & Antonio, 1990; Daniels & Daniels, 1991; Collins et al., 1991; Priest et al., 1999; Mack & Ryan, 2006). After analysing the results, the authors conclude that, in a general way, the users have more budgetary cash-based information than on accrual-based information. However, Kober et al. (2010), in a more recent study applied in the departments of the Australian government, intending to analyse users and trainers' perceptions on the usefulness of budgetary cash-based information and financial accrual-base information for the decision-making, the results obtained were contrary to the ones found in previous studies. The respondents were: (1) internal users (Department's directors and vice-directors), (2) external users (government staff responsible for the provision of the financial reporting for the publication of the Ministry of Finance and Treasury's Budget, and members of the Public Accounts Committee). The results indicate that the information organised on an accrual basis is generally considered more useful than the budgetary cash-based accounting, pointing to the conclusion that the former seems to have been increasing. Likewise, Andriani et al. (2010) prove the results obtained by Kober et al. (2010) for the same type of decisions, but within the context of the internal decisions and only in respect to the public management of the departments of the Australian government.

From the studies focused on internal users, some do not make a distinction between politicians and managers or, in some cases, have only studied one of these users' categories, covering mainly the financial vs non-financial information. Furthermore, Guthrie et al. (1999) underline the reduced usefulness of the financial reporting by the majority of politicians. At the same time, Ter Bogt (2004) argues that politicians are unlikely to use performance measures and instead they trust informal communication. Jones et al. (1985) and Hay & Antonio (1990) also reveal that the budget results and the indicators of efficiency and effectiveness illustrate high usefulness, other than the information disclosed in the financial reporting.

Only a small number of studies takes into account the politicians' perspectives or compares them with the managers'. For instance, Brusca (1997), on the one hand, in a study

on Spanish municipalities intended to determine the usefulness of financial statements (of a budgetary, economic and financial nature), confirmed that politicians were the ones who gave less importance to the financial reporting, due to insufficient training. On the contrary, managers were the users who attached more importance to the financial reporting. On the other hand, the author realised that even though the financial reporting of the Spanish municipalities reveals to be useful for the financial directors, municipal Bodies, the Court of Auditors and creditors, the information disclosed is not actually used to the greatest extent. Paulsson (2006), when analysing the introduction of the accrual accounting on the Swedish Central Administration, has verified that the information on an accrual basis accounting is used more by managers than by politicians.

In Portuguese context, to date and as far as we are aware, there are only two published studies on the internal usefulness of the financial information within the Public Sector – Barbosa (2006) and Carvalho et al. (2008). The latter focuses on the Portuguese Local Administration and the former, a study developed for a Central hospital, concentrates on the Health sector. Carvalho et al. (2008) analysed the internal usefulness of the Portuguese municipalities' financial information tabled in accountability. The authors concluded that both Executive and Deliberative Bodies discuss the same types of budgetary cash-based accounting. Nevertheless, it is the Executive Body that attaches the greatest importance to the different types of economic and financial information, that is, on an accrual basis. The authors also stated that both Bodies place higher emphasis on the budgetary information. It is important to stress that neither of these works analyses in detail the financial information for the several decisions among politicians and managers, nor examines the possible factors affecting that usefulness. For that reason, the current study is an attempt to contribute to filling this noteworthy gap.

## **4. Empirical study**

### **4.1 Objectives and research questions**

Even though the publication of POCAL, as referred to, has been the main aspect of the reform of the Local Government accounting in Portugal, it is no certain that, in spite of theoretical intentions recommended in the diploma, the current model of financial reporting is duly adequate and that it makes available in reality, information that is useful for decision-making (similar to what has been verified in other countries – e.g., Brusca, 1997; Mack, 2004; Yamamoto, 2008). Thus, this empirical study has as the objectives, in the context of internal



decision-makings (political and technical decision-makers) in Portuguese municipalities: (1) to assess the usefulness of the municipal financial reporting, namely of the mandatory preparation documents, (2) to verify the usefulness of the accrual-based information, and (3) identify and assess the usefulness of other information of voluntary preparation. In addition, by performing a cross-section analysis, to evaluate if the profile of the respondent (according to the training area and professional experience) is, in some way, associated with the usefulness attributed to the municipal financial reporting. The proposed objectives intend to answer the following research questions:

- (1) Which accounting statements are more useful for internal decision-making?*
- (2) What is the use of accrual basis information for internal decision-making?*
- (3) Which type of non-mandatory information is revealed as useful for internal decision-making?*
- (4) What is the relationship between the respondents and the usefulness they attribute to municipal financial reporting?*

## **4.2 Research methodology**

In Public Sector accounting research, particularly in Local Government, the authors used both a quantitative approach (Jones et al., 1985; Daniels & Daniels, 1991; Collins et al., 1991; Brusca, 1997; Tayib et al., 1999; Priest et al., 1999; Mack, 2004; Mack & Ryan, 2006; Yamamoto, 2008; Cohen, 2009; Kober et al., 2010; Andriani et al., 2010) as a qualitative approach (Hay & Antonio, 1990; Grossi & Reichard, 2009).

In both the quantitative and qualitative approaches, different research paradigms have been adopted, taking into account the criterias of the position of the researcher on the nature of the social sciences (objective or subjective) and the perspective that the researcher has on the reality (radical changes or regulation) (Hopper & Powell, 1985).

Specifically, the positivist paradigm research (Hopper & Powell, 1985; Davila & Oyon, 2008) assumes the independence of the researcher before the reality. It utilizes the technique of formulation and verification of the hypotheses, normally using tools of quantitative character through the adoption of the methods of social sciences in order to find and deduce a causality association (Davila & Oyon, 2008). In this manner, it promotes the scientific construction through a perspective of acceptance and rejection of the hypotheses, in other words, it is a constant search for the truth (Davila & Oyon, 2008).

Because the evidence that is intended to be obtained is necessary to comply with the defined objectives and is compatible with an objective conception of the reality, seen as external to the researcher, it is understood that the most adequate option for this study is the quantitative approach with the use of the positive paradigm research.

### **4.3 Research hypotheses**

Brusca (1997) and Yamamoto (2008) considered that the training area and professional experience of the users is related with the usefulness of financial reporting, inasmuch as they make use, for their decision-making of different types of information according to some personal characteristics. For example, Brusca (1997) proved that the users who have training in the area of management attribute greater usefulness to the information disclosed in the financial reporting. In the same way, Yamamoto (2008) verified that the training area and professional experience are positively related with the usefulness attributed to the financial statements. Along this line, and considering the possibility of a positive association between the training area and professional experience of the internal decision-makers (politician and technicians) and the usefulness of municipal financial reporting for the process of decision-making, the following research hypotheses were formulated:

*H1: The area of training of political decision-makers is directly related to the usefulness of municipal financial reporting.*

*H2: The area of training of technical decision-makers is directly related to the usefulness of municipal financial reporting.*

*H3: The professional experience of political decision-makers is directly related to the usefulness of municipal financial reporting.*

*H4: The professional experience of technical decision-makers is directly related to the usefulness of municipal financial reporting.*

One of the main changes verified in the recent reform of the Local Government accounting in Portugal was, as explained, the introduction of the accrual basis in the accounting systems. For Guthrie (1998), Van der Hoek (2005), Kober et al. (2010) and Andriani et al. (2010) the use of the accrual basis in the preparation of the financial reporting of public entities allows for disclosure of information of greater usefulness for decision-making, namely internal decision, such as Budget preparation and defining fees. This information helps to improve transparency and rendering of the responsibilities of the local

entities benefiting the users (Kober et al., 2010). Some studies (Mack, 2004; Yamamoto, 2008; Carvalho et al., 2008; Grossi & Reichard, 2009) conclude that users of financial reporting do not recognize the accrual-based information useful for their decision-making, and continue to show preference for the budgetary cash-based information. On the contrary, Kober et al. (2010) and Andriani et al. (2010) in a study performed to assess the perceptions of the users and preparers of the financial reporting regarding the usefulness of accrual-based and budgetary cash-based information for internal decision-making, reveal that the accrual-based information is generally considered of greater usefulness.

Based on early studies and considering the reality of the Portuguese municipalities, the following research hypothesis was formulated:

*H5: Accrual-based information has low usefulness for internal users as support to internal decision-making.*

#### **4.4 Questionnaire**

In order to collect the necessary data, a survey done by a structured type questionnaire was chosen, similar to those of other authors (e.g., Daniels & Daniels, 1991; Collins et al., 1991; Brusca, 1997; Tayib et al., 1999; Mack, 2004; Mack & Ryan, 2006; Yamamoto, 2008; Cohen, 2009; Kober et al., 2010; Andriani et al., 2010). The elaboration of the questionnaire began by reviewing the literature on empirical studies (see section 3), with the systematization of the information by raising questions already developed and used in other studies. However, items that only concern financial reporting of the Portuguese municipalities were included, such as the case of the accounting statements according to the POCAL. In addition to the information on the respondents (position/function, professional experience – number of years at their positions/functions at the municipality, level of higher education, training area and age), the questionnaire was structured according to the objectives of the study, and the part being analysed here, comprises only of one dimension in respect to the usefulness of financial statements (also including the usefulness of the content of the principal statements – Balance Sheet and Income Statements by Nature) of non-mandatory preparation and disclosure in the context of the POCAL and of other financial information, used in internal decision-making, that are prepared and disclosed voluntary. To evaluate the usefulness, ordinal variables were used based on the Likert rating scale of 5 points, similar to studies the studies of Tayib et al. (1999), Mack (2004), Yamamoto (2008), Andriani et al. (2010) and Kober et al. (2010). For application of questionnaire, we opted to send it by email.

#### 4.5 Population, collecting data and sampling

Taking into account the defined objectives of this study and considering that it is based on the analysis of the Portuguese Local Administration, all of the political (members of the executive body) and technical<sup>5</sup> decision-makers, those mainly responsible for the finance area of all of the Portuguese municipalities (308), were defined as the target population.

The respondents were selected by taking into consideration their predominant role as internal municipal decision-makers<sup>6</sup> and, subsequently, as the principal users of the municipal financial information<sup>7</sup>.

Given the need to use electronic mail to collect the necessary data (sending out the questionnaire), a data base was created with the necessary information of all the political and technical decision-makers by looking up the information available on the webpage of the Local Government of the Directorate General of local entities and the webpage of Portuguese municipalities. In addition, follow-up emails were sent and phone calls made to the municipalities whose information had not been obtained. The total population is composed of 616 decision-makers of the 308 Portuguese municipalities.

The survey was conducted between April and July 2011. By the end of this process, 302 completed questionnaires had been gathered, which correspond to 49.03%. The percentage of responses can be considered as very satisfactory when compared to those of other analogous studies<sup>8</sup>.

The 302 received responses were from 231 municipalities (75% of the total), being that only 71 were responses obtained from both groups of decision-makers. In accordance with the results obtained, a greater availability on the part of the technical decision-makers to answer the questionnaire was verified (67.53%), noting that globally an acceptable number of responses (> 30%) was received from both of the groups of internal decision-makers.

In relation to the profile of the respondents by decision-maker group, the results obtained can be synthesized as follows:

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<sup>5</sup> Financial Department, or Financial Division, or Accounting Section, according to the organizational structure of each municipality.

<sup>6</sup> The senior financial officials of municipalities were considered as stakeholders in the decision-making process since they provide technical opinions to the decision-making of top managers.

<sup>7</sup> By asking heads of financial departments and auditors, Brusca (1997) found that the legislative bodies and the heads of financial-economic management were considered the most important internal users of financial information of Spanish municipalities.

<sup>8</sup> See, for example, Brusca, 1997 – 38.5%, Andriani et al., 2010 – 23% and Kober et al., 2010 – 21%.

- The majority of respondents (56.96%) had, at the time the questionnaire was applied, been at their positions/functions from 1 to 9 years (Mean = 3.23; Std. dev = 1.189). 30.77% of the decision-makers had been at their current position from 5 to 9 years, being that 22.6% had been at their positions for more than 15 years. 44.68% of the political decision-makers had worked from 1 to 4 years and 25.53% from 5 to 9 years. The differences between the percentages, in relation to the groups of decision-makers, appear to be justifiable by the number of years corresponding to the electoral period (4 years). These facts allow for the consideration that it is the technical decision-makers who seem to have sufficiently satisfactory experience in the position or function they perform, which is extremely important for this study, given their familiarity with the topic being studied, suggesting therefore, a good quality of the source of data.
- 90.6% of the surveyed decision-makers have a level of higher education. Two respondents hold Doctorate degrees (within the group of political decision-makers). It should be pointed out that the number of respondents with a high school diploma is reduced, reaching 9.94%. Keeping in mind that the questionnaire was directed at political and technical decision-makers could, in some ways, justify these results. An analysis of the training areas of the respondents was also done, with Economics/Management as the prevailing answer (51.06% of the political decision-makers and 69% of the technical decision-makers), followed by «Other» in the majority of cases, in the area of Law, specifically the political decision-makers (22.34%).
- In regard to age groups, an indicator of maturity, the majority of respondents were between 36 and 55 years old (Mean = 3.2; Std. dev = 0.898), being that 46.15% of the technical decision-makers were between 36 and 45 years old and 41.89% of the political decision-makers were between 46 and 55 years of age.

## **4.6 Presentation and analysis of the results**

### **4.6.1 Usefulness of accounting statements – Official Local Government Accounting Plan**

In regard to the usefulness of accounting statements prepared by POCAL for decision-making, the results synthesized in Table 1 indicate that, in general, the majority of accounting statements were useful for decision-making of the respondents (with a usefulness higher than the intermediate value of the scale). The Management Report and the Indebtedness Statement – Borrowings and Accounts Payable to Others are the most useful documents for the decision-

making of the respondents (with a mean level of usefulness of 4.53 and 4.52, respectively). These are in line with the results of Brusca (1997), in which the respondents also consider the Indebtedness Statement as very useful. The Budgetary Modifications Statement – Expenditure and Revenues, the Investments Multi-annual Plan Modification Statement, the Fixed and Variable Income Assets Statement and the Production Variation Statement are the documents which are indicated as the least useful, but even so, are superior to the intermediate value of the scale. The results obtained from the application of the t-Student test (Table 1, last column) indicate that the two groups of decision-makers attribute, in general, a similar usefulness to the accounting statements (mandatory) for decision-making, although statistically significant exceptions are registered in relation to seven items. For the majority of the documents, the group of technical decision-makers attribute on average, a greater usefulness to the accounting statements (mandatory), in comparison to the group of political decision-makers. Nevertheless, the differences are statistically significant, for a  $p < 0.05$  in the Annual Execution Statement of Investment Multi-annual Plan, Current and Capital Transfers Statements – Revenue, the Obtained Grants Statements, the Statements of Gross Fixed Assets and Accumulated Depreciations and Adjustments and Fixed and Variable Income Assets Statement; for a  $p < 0.1$ , the differences are significant in the Balance Sheet and Cash Flow Statement.

The results show that the information on the accounting statements are, in general, very useful either for the political decision-makers or for the technical decision-makers, being evident that the accrual-based information already presents a high usefulness for both of the internal decision-makers. These results corroborate with the studies of Andriani et al. (2010) and Kober et al. (2010).

However, it is also verified that the Budgetary Statements continue to be the preferred ones for decision-making, with average values of usefulness above those of the documents prepared on the accrual basis. Such conclusions tend to contradict the results of Hay & Antonio (1990), Daniels & Daniels (1991), Collins et al. (1991), Brusca (1997), Priest et al. (1999) and Mack & Ryan (2006).

**Table 1: Usefulness of accounting statements**

<i>Indicates the degree of usefulness that the following reporting statements (mandatory) present in internal decision-making.</i>	Decision-makers							
						Political		Technical
	Mean (n=302)	Std. Dev.	Min./ Max.	%1/2 <sup>a</sup>	% 4/5 <sup>a</sup>	Mean (n=94)	Mean (n=208)	p- value <sup>b,c</sup>
Management Report	4.53	0.640	2/5	0.3	92.7	4.48	4.55	0.352
Indebtedness Statement– Borrowings and Accounts Payable to Others	4.52	0.645	2/5	0.3	92.4	4.49	4.53	0.623
Budgetary Control Statement – Expenditures and Revenues	4.46	0.718	2/5	1.3	89.4	4.39	4.49	0.279
Investment Multi-annual Plan	4.38	0.809	1/5	2.0	85.1	4.36	4.38	0.820
Annual Execution Statement of Investment Multi-annual Plan	4.36	0.755	2/5	1.7	86.4	4.21	4.42	0.025**
Balance Sheet	4.34	0.831	1/5	2.0	82.8	4.21	4.40	0.071*
Income Statement by Nature	4.32	0.828	2/5	2.6	82.1	4.26	4.36	0.330
Cash Flow Statement	3.99	0.891	2/5	5.0	69.9	3.84	4.06	0.050*
Current and Capital Transfers Statement – Revenue	3.84	0.837	2/5	5.0	65.6	3.98	3.77	0.049**
Current and Capital Transfers Statement – Expenditure	3.84	0.856	1/5	5.3	65.9	3.95	3.79	0.149
Financial Income Statement	3.83	0.837	2/5	5.0	64.9	3.81	3.84	0.708
Obtained Grants Statement	3.75	0.853	1/5	5.6	61.3	3.89	3.68	0.036**
Statement of Grants Given	3.75	0.851	1/5	5.6	61.9	3.86	3.71	0.143
Extraordinary Income Statement	3.72	0.872	2/5	7.6	59.3	3.66	3.75	0.431
Statements of Gross Fixed Assets and Accumulated Depreciations and Adjustments	3.71	0.908	1/5	7.6	57.6	3.52	3.80	0.014**
Administrative Procurement Statement – Contracts Situation	3.66	0.918	1/5	9.3	54.6	3.65	3.66	0.899
Order Accounts Statement	3.55	0.969	1/5	14.2	50.0	3.48	3.58	0.393
Treasury Operations Statement	3.53	1.023	1/5	15.9	47.0	3.45	3.57	0.344
Cost of goods sold and Materials Consumed Statement	3.52	0.932	1/5	12.6	50.7	3.51	3.53	0.875
Budgetary Modifications Statement – Expenditures and Revenues	3.38	0.977	1/5	18.5	43.4	3.40	3.37	0.780
Investment Multi-annual Plan Modifications Statement	3.38	0.997	1/5	18.2	41.7	3.36	3.39	0.823
Fixed and Variable Income Assets Statement	3.38	0.970	1/5	16.6	43.4	3.48	3.34	0.049**
Production Variation Statement	3.21	0.958	1/5	21.2	39.1	3.20	3.22	0.905

<sup>a</sup> Scale: [1] useless – [5] Extremely useful. In this table, “useless” represents the percentage of the respondents that responded [1] or [2] of the responses of the scale; “extremely useful” represents the respondents that responded [4] or [5] of the scale.

<sup>b</sup> p-value or asym. significance of the t-Student test.

<sup>c</sup> \*\*\*, \*\*, \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

#### 4.6.2 Usefulness of accrual-based information

For the purpose of knowing, in greater detail, the degree of usefulness of the patrimonial and financial information introduced in the current system of Local Government accounting information including the patrimonial accounting, the respondents were questioned about the usefulness of the different items of the Balance Sheet for internal decision-making. The information regarding Accounts Payable – Short and Medium-long term is the one that was shown to have the greatest usefulness for the decision-making of the respondents (4.34). On average, it is verified that information concerning Accounts Receivable – Short and Medium-long term (4.31) and regarding the Deposits in Financial Institutions and Cash (4.10) are also of great usefulness. With a lower average usefulness, but even so, still above the intermediate level of the scale is the information of the Revaluation Reserves (3.26) and of the Legal Statutory, Contractual, Free Reserves, Grants, Donations and Reserves resulting from Transfers of Assets (3.25), in other words, the information of the components of the Own Fund (Table 2). In general, the technical decision-makers attribute a

greater usefulness to the patrimonial and financial information on the Balance Sheet, comparatively to the political decision-makers, which confirms the results obtained in the previous analysis referring to the usefulness of the Balance Sheet (mandatory accounting statements) in providing assistance in the internal decision-making of the respondents. The statistics reveal significant differences between political and technical decision-makers only in regard to the Fixed Assets in Progress and tangible Fixed Assets ( $p < 0.05$ ).

**Table 2: Usefulness of patrimonial and financial information (Balance Sheet)**

<i>Indicates the degree of usefulness that the following patrimonial and financial information disclosed in the Balance Sheet presents in internal decision-making.</i>	Mean (n=302)	Std. Dev.	Min./ Max.	%1/2 <sup>a</sup>	%4/5 <sup>a</sup>	Decision-makers		
						Political (n=94)	Technical (n=208)	p- value <sup>b,c</sup>
Accounts payable – Short and Medium-long Term	4.34	0.720	1/5	0.7	87.7	4.31	4.36	0.598
Accounts Receivable – Short and Medium-long Term	4.31	0.713	1/5	0.3	87.1	4.26	4.34	0.333
Deposits in Financial Institutions and Cash	4.10	0.881	1/5	3.6	75.2	4.01	4.14	0.233
Property	3.94	0.918	1/5	6.3	68.2	3.99	3.91	0.489
Financial Investments	3.85	0.838	2/5	4.6	65.9	3.82	3.87	0.625
Fixed Assets in Progress	3.83	0.882	2/5	6.0	63.2	3.69	3.89	0.046**
Tangible Fixed Assets	3.80	0.872	2/5	5.6	61.3	3.65	3.87	0.064**
Accruals and Deferrals – Asset	3.74	0.896	1/5	9.3	63.2	3.64	3.79	0.178
Accruals and Deferrals– Liabilities	3.74	0.909	2/5	9.3	60.6	3.68	3.76	0.487
Stocks	3.72	0.888	1/5	7.3	57.9	3.74	3.70	0.699
Public Domain Assets	3.70	0.928	1/5	7.9	56.6	3.63	3.74	0.350
Total of Accumulated Depreciations	3.65	0.934	2/5	10.9	55.0	3.57	3.69	0.331
Intangible Fixed Assets	3.64	0.899	2/5	8.9	53.3	3.53	3.69	0.152
Total of Accumulated Provisions	3.58	0.957	1/5	12.9	52.6	3.52	3.61	0.453
Retained Profits	3.56	0.975	1/5	13.6	50.0	3.52	3.58	0.647
Provisions for Risks and Charges	3.52	0.970	1/5	13.9	49.3	3.44	3.56	0.314
Capital Shares in Group Companies Adjustment	3.46	1.000	1/5	15.9	46.4	3.34	3.51	0.162
Negotiable Securities	3.43	1.034	1/5	17.2	46.4	3.33	3.48	0.256
Revaluation Reserves	3.26	1.008	1/5	21.5	37.7	3.21	3.28	0.599
Legal, Statutory, Contractual, Free Reserves. Grants, Donations and Reserves resulting from Transfer of Assets	3.25	1.001	1/5	21.9	36.4	3.13	3.30	0.171

<sup>a</sup> Scale: [1] useless – [5] Extremely useful. In this table, “useless” represents the percentage of the respondents that responded [1] or [2] of the responses of the scale; “extremely useful” represents the respondents that responded [4] or [5] of the scale.

<sup>b</sup> p-value or asym. significance of the t-Student test.

<sup>c</sup> \*\*\*, \*\*, \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

A similar analysis has tried to assess the usefulness of economic information (information disclosed in the Income Statement by Nature, introduced in the Local Government accounting, the similarity of the information of the Balance Sheet with the inclusion of patrimonial accounting). The analysis in Table 3 verifies that, on average, the respondents attribute a high usefulness to the information on Staff Costs (4.41), followed by the information items about Taxes and Fees and Transfers and Grants Given (4.48). The elevated value of the Staff Costs seems to show the preoccupation on the part of the decision-makers regarding what the weight of this component of the costs means for the municipalities. The significant usefulness attributed to Taxes and Fees appears to be normal, given the relevance that this source of incomes and revenues has for the municipalities. The information



on the Gross Fixed Assets and Accumulated Depreciation and Adjustments is the item with the lowest usefulness (3.45), although higher than the intermediate value of the scale. The results obtained seem to confirm those from the analysis done to the usefulness of accounting statements (mandatory), specifically to the usefulness of the Income Statement by Nature. On average, the group of technical decision-makers attributed a greater usefulness to types of information about Sales and Services Rendered, Extraordinary Income, Taxes and Depreciations for the year, when compared with the group of political decision-makers. The differences are statistically significant for a  $p < 0.05$  in the first two situations and a  $p < 0.1$  in the remainders.

**Table 3: Usefulness of economic information (Income Statement by Nature)**

<i>Indicates the degree of usefulness that the following economic information disclosed in the Income Statement by Nature presents in internal decision-making.</i>	<b>Decision-makers</b>							
	Mean (n=302)	Std. Dev.	Min./ Max.	% 1/2 <sup>a</sup>	% 4/5 <sup>a</sup>	Political	Technical	<i>p-value</i> <sup>b,c</sup>
						Mean (n=94)	Mean (n=208)	
Staff Costs	4.41	0.685	2/5	0.30	89.40	4.40	4.42	0.870
Taxes and Fees	4.26	0.717	2/5	0.70	85.40	4.16	4.31	0.086*
Transfers and Grants Given	4.18	0.749	2/5	1.70	82.80	4.13	4.21	0.397
Sales and Services Rendered	4.15	0.754	2/5	1.00	80.10	4.00	4.22	0.018**
Transfers and Grants Obtained	4.12	0.787	2/5	1.70	77.80	4.05	4.15	0.304
External Supplies and Services	4.12	0.781	2/5	2.30	79.50	4.02	4.16	0.143
Net Profit for the year	3.99	0.924	1/5	6.00	71.90	4.02	3.98	0.694
Financial Costs	3.99	0.811	2/5	2.60	72.20	3.90	4.03	0.200
Extraordinary Costs	3.85	0.863	1/5	4.30	63.90	3.80	3.88	0.473
Financial Income	3.83	0.825	2/5	3.00	61.90	3.70	3.88	0.075*
Own Work Capitalized	3.83	0.911	1/5	7.30	65.60	3.74	3.88	0.254
Extraordinary Income	3.78	0.865	1/5	4.60	59.90	3.61	3.87	0.016**
Other Operating Costs	3.74	0.843	1/5	4.60	58.60	3.68	3.77	0.400
Depreciations for the year	3.70	0.914	1/5	7.60	55.00	3.55	3.76	0.063*
Other Extraordinary Income	3.67	0.840	2/5	5.30	53.60	3.56	3.71	0.132
Supplementary Income	3.66	0.842	2/5	5.30	52.60	3.56	3.72	0.224
Provisions for the year	3.65	0.920	1/5	9.30	55.00	3.55	3.70	0.208
Gross Fixed Assets and Accumulated Dep. Adjustments	3.54	0.973	1/5	12.30	49.00	3.48	3.57	0.441

<sup>a</sup> Scale: [1] useless – [5] Extremely useful. In this table, “useless” represents the percentage of the respondents that responded [1] or [2] of the responses of the scale; “extremely useful” represents the respondents that responded [4] or [5] of the scale.

<sup>b</sup> p-value or asym. significance of the t-Student test.

<sup>c</sup> \*\*\*, \*\*, \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

In a general way, in the cases in which the differences are statistically significant, the results obtained permit us to conclude, similarly to Paulsson (2006), that it is the technical decision-makers who attribute a greater usefulness to the accrual-based information.

#### 4.6.3 Usefulness of other financial information prepared and disclosed voluntarily

The decision-makers were also surveyed in order to assess the usefulness, for internal decision-making, of other documents or types of information, in addition to the ones that are mandatory to be disclosed in the annual accounts. The results in Table 4 show that the respondents consider the disclosure of other documents or types of information very useful. In the group of items referring to other documents, the Consolidated Management Report is the

most useful document (with an average concordance of 3.63), being the Consolidated Income Statement by Functions the document with the lowest average. It is surprising to note that, similarly to the analysis of Table 1, the Consolidated Management Report also appears here as being the most useful of the non-mandatory documents of the annual accounts. Relatively to the set of indicators presented<sup>9</sup>, the respondents considered the information obtained through indicators developed based on the Balance Sheet as the most useful (3.96). From the set of indicators presented, developed based on the Balance Sheet, the calculation of the Municipality Net Indebtedness is the most useful indicator for decision-making (4.33). This information corroborates with the results of the previous analyses, namely regarding the need for financial information concerning the capacity for indebtedness and the usefulness attributed to Accounts Payable-Short and Medium-long Term. From the information obtained through the elaborated indicators based on the execution of the budget, the respondents attributed a greater usefulness to the information concerning Staff Expenditures vs Total Expenditures (4.19). The information obtained from the calculations of Staff Costs vs Operational Costs (4.07), elaborated based on the Income Statement by Nature was the indicator with the highest usefulness. These results highlight, once again, the usefulness attributed to Staff Costs when surveyed on the usefulness of the economic information disclosed in the Income Statement by Nature (Table 3). The differences regarding the usefulness of other documents or types of information for internal decision-making do not appear to be statistically significant between the groups of decision-makers.

The results obtained in the descriptive statistics are consistent with those of Jones et al. (1985) and Hay & António (1990), whose studies show the usefulness of information on budget results and indicators of efficiency and efficacy. They are also in accordance with the results of Ter Bogt (2004) and Lee (2008) that show that users of financial information attribute usefulness to other types of information, in particular, on the performance in providing services and of a non-financial character, in addition to the information disclosed in the financial reporting.

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<sup>9</sup> The set of indicators presented in this investigation resulted, on the one hand, from the Carvalho et al. (2008) indicators and, on the other hand, from a search made to Management Reports of 2010 (mandatory document of accounting statements) of some municipalities, choosing the most frequent indicators.

**Table 4: Usefulness of other documents and other financial information**

<i>For decision-making process, indicates other financial documents or other types of information, apart from the mandatory documents, that are considered useful:</i>							Decision-makers		<i>p-value<sup>b</sup></i>
	Mean (n=302)	Std. Dev.	Min./ Max.	%1/2 <sup>a</sup>	% 4/5 <sup>a</sup>	Political	Technical		
						Mean (n=94)	Mean (n=208)		
<b>Others documents</b>									
Consolidated Management Report	3.63	1.060	1/5	11.90	57.60	3.66	3.62	0.766	
Notes to the Consolidated Balance Sheet and to the Consolidated Income Statement, including, namely, the financial flows and stocks between the entities subjected to consolidation and the consolidated indebtedness statement – medium and long term	3.59	1.003	1/5	10.90	55.00	3.53	3.62	0.480	
Consolidated Income statement by nature	3.57	1.015	1/5	12.30	53.30	3.61	3.55	0.672	
Consolidated Income statement by functions	3.53	0.891	1/5	9.90	52.00	3.52	3.54	0.877	
<b>Other types of information</b>									
1. Information obtained through indicators developed based on the Balance Sheet:	3.96	0.806	1/5	2.00	71.50	3.96	3.96	0.967	
1.1. Municipality Net Indebtedness = Total Debts Payable – (Debts Receivable + Cash)	4.33	0.753	1/5	1.00	85.80	4.36	4.31	0.600	
1.2. Current liabilities/Current Assets	3.90	0.833	1/5	2.70	67.20	3.89	3.90	0.922	
1.3. Own funds/Total Assets	3.82	0.875	1/5	4.60	63.60	3.85	3.81	0.669	
2. Information obtained through indicators developed based on the Budget execution:	3.90	0.781	1/5	3.00	71.90	3.84	3.92	0.396	
2.1 Staff Expenditures/Total Expenditures	4.19	0.752	1/5	1.30	83.10	4.27	4.15	0.231	
2.2 Total Revenue/ Total Expenditure	4.17	0.793	1/5	2.00	80.80	4.22	4.15	0.451	
2.3 Financial Charges/Current Expenditures	4.09	0.798	1/5	2.00	78.10	4.17	4.05	0.219	
3. Information obtained through indicators developed based on the Income Statement by Nature:	3.85	0.817	1/5	3.30	65.60	3.85	3.85	0.959	
3.1. Total Income/Total Costs	4.00	0.803	1/5	1.00	70.90	4.02	3.99	0.757	
3.2. Staff Costs /Operational Costs	4.07	0.777	1/5	1.00	76.20	4.12	4.05	0.476	
3.3. Current Income/Current Costs	4.00	0.780	1/5	1.00	73.80	4.01	4.00	0.913	

<sup>a</sup> Scale: [1] useless – [5] Extremely useful. In this table, “useless” represents the percentage of the respondents that responded [1] or [2] of the responses of the scale; “extremely useful” represents the respondents that responded [4] or [5] of the scale.

<sup>b</sup> p-value or asym. significance of the t-Student test.

## 4.7 Tests of hypotheses

To test the hypotheses, the bivariate analysis was also done with the application of Kruskal-Wallis, Chi-square and one-sample T tests.

The variables for the tests of hypotheses were constituted based on the simple average of items as part of each factor extracted from the factorial analysis in principal components of the scale. The results of the factorial analysis of the dependent variables for the tests of the hypotheses are indicated in Appendix.

Thus, for the variable ‘usefulness of municipal financial reporting’, the results of the KMO test (equal to 0.911) indicated that the quality of the correlations between the variables is very good (Marôco, 2010). On the other hand, the results of Bartlett’s test ( $p < 0.05$ ,  $\alpha = 0.000$ ) demonstrated that there is a positive correlation between the variables ( $\chi^2_{(351)} = 80.077.504$ ).

Before performing the tests of hypotheses, and similarly to what was previously done, a descriptive analysis of the constituted variables was done, with the objective of knowing the general behaviour adopted by the sample before the measured concepts. Five factors were extracted from the factorial analysis from which the global variable referred to was constituted. The results of the Cronbach's Alpha showed a reasonable internal consistency – Cronbach's Alpha equal to 0.755. The perception of the respondents on the usefulness of municipal financial reporting for internal decision-making indicates that it is quite useful, with an average of 4.12.

In order to evaluate the first two hypotheses statistical testing was performed to find out whether there is an association between the training area by group of decision-makers and the usefulness of municipal financial reporting. The results of the tests of Kruskal-Wallis ( $p > 0.05$ ) revealed that, for a level of significance of 0.05, there is no statistically significant association between the training area of the internal decision-makers and the usefulness of municipal financial reporting.

Taking into account the dispersion of the data on the training area when the crossing of the variables was realized, as they were initially defined, in a second analysis, the option was taken to group them into two categories following the methodology also adopted by Brusca (1997). One which includes the individuals (political decision-makers,  $n=61$  and technical decision-makers,  $n=175$ ) with training in Management (Economics/ Management, Accounting and Auditing), and the other which aggregates (political decision-makers,  $n=33$  and technical decision-makers= $33$ ), those who have other types of training (Engineering, Law, ...). For this analysis, the Chi-square test was performed, which makes it possible to analyse the independence between two variables, rejecting the null hypothesis for any p-value less or equal to the determined probability of error of type I. The results obtained from the application of the test (political decision-makers,  $\chi^2_{(1)} = 1.338$ ;  $p = 0.247$ ; technical decision-makers,  $\chi^2_{(1)} = 0.328$ ;  $p = 0.567$ ) show that there is no statistically significant association between the variables. In these terms, the hypotheses (H1 and H2) are refuted, in other words, there is no statistical evidence of an association between the training area of the respondents and the usefulness attributed to municipal financial reporting. The results obtained contradict the conclusion of Brusca (1997) and Yamamoto (2008). The fact that the studies of these authors are not focused on decision-making and focus interchangeably on external and internal users, could justify the difference of this empirical evidence.

In the third and fourth hypotheses, the association between the professional experience of the internal decision-makers and the usefulness attributed to the municipal financial

reporting was analysed. In order to do so, two groups of internal decision-makers were created, taking into consideration the number of years they had been at their positions/functions. Thus,

1. Group I – considerable professional experience: internal decision-makers who have been at their positions/functions for 5 years or more.
2. Group II – reduced professional experience: decision-makers who have been at their positions/functions for less than 5 years.

In the case of the political decision-makers, the frequencies revealed that 51 respondents (54.26%) pertain to group I and 43 respondents (45.74%) to group II. In the case of the technical decision-makers, 154 respondents (74.04%) pertain to group I and 54 respondents (25.96%) to group II. The results obtained from the Chi-square test lead to the conclusion that there is no statistically significant association between the variables ( $p = 0.501$ , political decision-makers;  $p = 0.472$ , technical decision-makers), in other words, the null hypothesis which stipulates that the variables be independent is not rejected. Thus, it can be affirmed that there are no statistical evidences that confirm the association between professional experience and the usefulness of municipal financial reporting of the internal municipal decision-makers, thus refuting, H3 and H4. This result is also contrary to the conclusions obtained by Yamamoto (2008) that show evidence that professional experience is positively associated with the usefulness attributed to the municipal financial reporting.

Also for the variable ‘usefulness of the accrual-based financial information’ a factorial analysis was used. The results of the factorial analysis (Appendix) reveal the constitution of only one factor, that of the usefulness of information on the Balance Sheet. The results of the KMO test (0.947) and the Bartlett’s test ( $p < 0.001$ ) indicate that the factorial analysis is very good and that it can provide satisfactory conclusions (Marôco, 2010). In the same manner, the results of the factorial analysis of the variables affect the usefulness of the information disclosed in the Income Statement by Nature leading to the constitution of only one factor that explains 74.34% of the total variance of the responses. The results of the KMO test (0.944) indicate that the quality of the correlations between the variables is very good (Marôco, 2010). On the other hand, the results of Bartlett’s test revealed that there is a positive correlation between the variables ( $p < 0.001$ ). According to the referred methodology, based on the average of the factors extracted, the variable ‘usefulness of the accrual-based financial information’ was constituted, whose results of the coefficient of Cronbach’s Alpha (equals to 0.975) indicate a very good internal consistency (Marôco, 2010).

In order to verify the usefulness of patrimonial, financial and economic information (elaborated on the accrual basis) for internal decision-makers in assisting them in making decisions (H5) the parametric T-student test was performed to obtain a sample. Taking into consideration the defined scales (1-‘Useless’ to 5-‘Very useful’) to assess the usefulness of accrual-based information, for internal decision-making process of the municipal users, the scale 3 (useful) was taken as a reference value for the execution of the test. Thus, the intention was to test:  $H_0$ : «*The average of the usefulness of accrual basis information for internal decision-makers is equal or inferior to 3*» and  $H_a$ : «*The average of the usefulness of accrual basis information for internal decision-makers is greater than 3*». The results obtained show that for a level of significance of 0.05, there are statistical evidences to affirm that the average of the usefulness of accrual basis information for internal decision-making is superior to 3 ( $p < 0,001$ ), measured on a scale of 1 (useless) to 5 (very useful). It is estimated that, with a 95% confidence interval, the average of the usefulness of accrual basis information for decision-making is between 3.6 and 4.9, being that the interval of the difference between the higher average of the political decision-makers and the lower average attributed by the technical decision-makers is 0.114, which means that it is the technical decision-makers who, in comparison with the political decision-makers, attribute a greater usefulness to the accrual-based information. These results are not surprising given the accounting knowledge of the technicians of the financial area, and corroborate Paulsson’s (2006) conclusions, when he suggests that the accrual-based information is more useful for the technicians than for the politicians. Thus, H5 is rejected, which leads to the conclusion that accrual-based information is attributed usefulness as elevated as is attributed to budgetary cash-based information. This empirical evidence confirms the conclusions of Guthrie (1998), Van der Hoek (2005), Kober et al. (2010) and Andriani et al. (2010), and could also be justified by considering the familiarity of the users with the information prepared by accrual accounting.

## 5. Conclusions

Internationally, during the last decades, the actions of the leaders of local entities, namely in regard to the utilization and usefulness of public resources have become a fundamental concern in the context of the NPM. As a response to the new needs of information of local governments’ leaders, changes were introduced in the accounting information systems that, among others, altered the form and content of financial and budgetary statements prepared and disclosed by local entities.

In this context, this study focused on the analysis of financial information that is expected to be prepared and disclosed by municipalities in Portugal, as a mean to support the internal decision-making process by local governments' leaders, contributing to the analysis of the usefulness of the current municipal financial reporting and indicating mandatory accounting statements, but also other documents or types of information of greater or lesser usefulness for internal decision-making. In addition, it tried to verify the usefulness of accrual-based information, inasmuch as one of the principal recent changes in Local Government accounting was the adoption of a financial reporting model based on that of the business sector, with the objective of disclosing useful financial for decision-making and internal control.

In regard to the first question of the study (documents of greatest usefulness), the empirical analysis shows that the Management Report and the Indebtedness Statement (Borrowings and Accounts Payable to Others) are the mandatory accounting statements with the highest usefulness for decision-making by the respondents. The Budgetary Modifications Statement – Expenditures and Revenues, the Investment Multi-annual Plan Modifications Statement, the Fixed and Variable Income Assets Statements and the Production Variation Statement are the documents showing the most reduced usefulness but, even so, above the intermediate value of the scale.

In regard to the second question (usefulness of accrual-based information), the results reveal that, in general, budgetary cash-based statements are the most useful ones, still with a minor difference, for internal decision-making, when compared with patrimonial, financial and economic information statements, elaborated on the accrual-basis. Nevertheless, it is verified that the usefulness attributed by the respondents to accrual-based statements is, therefore still high, which means that users are beginning to use accrual-based information more for the process of internal decision-making. Such evidences suggest that the usefulness of accrual-based information, understood by internal decision-makers, is increasing with time. Such a fact could be justified by taking into account the familiarity of the respondents with this information and having more experience with the current system of Local Government accounting, inasmuch as it has been more than a decade after its introduction with POCAL.

In regard to the third question (usefulness of non-mandatory documents and other types of information), it was verified that the usefulness attributed to the disclosure of other types of information prepared voluntarily is also quite high, as supporting the process of internal decision-making.

Differences were also found, though reduced, between the groups of decision-makers – political and technical – regarding the usefulness attributed to the financial reporting elaborated and reported by Portuguese municipalities, in the context of internal decision-making. However, differences were not sufficiently significant. In addition, and in answer to the fourth question of the study (the association between the profile of the respondents and the usefulness attributed to municipal financial reporting), there is no statistical evidence that relates both the area of training and professional experience of the internal decision-makers with the usefulness attributed to municipal financial reporting.

In summary, the results of the empirical study show a high usefulness of municipal financial reporting for internal decision-makers (political and technical), although such usefulness could be increased with the introduction of voluntary information and some adjustments to the contents of mandatory budgetary and financial statements, that already show considerable usefulness.

Although this study presents some interesting conclusions, it also has some limitations. Considering the basic approach that was chosen was a cross-section study and methods of quantitative analysis, the first limitation is the fact that this type of analysis allows for associations to be established, but not causality. The use of only one instrument (a questionnaire) to measure all the variables of the study could also have skewed the answers of the respondents and caused the variance of the common method. Another aspect which could have affected the results is the “noisiness of the measures”. The application of the questionnaire by email does not allow for evaluating the truthfulness and integrity of the responses, in addition to not allowing for an evaluation of the real knowledge of the municipal financial reporting to be possible, even though the questionnaires were sent directly to the top person responsible for the finance area. Indeed, the measurement of municipal financial reporting usefulness is based on the opinions of the respondents (perceptive measures) and not on objective measures which, on the one hand, does not allow for a rigorous and clear interpretation of the results and, on the other hand, could have threatened the internal validity of the study.

In spite of these limitations, this study contributed to the scientific literature regarding the reform of accounting systems and of Local Administration financial reporting, providing, as far as it is our knowledge, the first cross-section evaluation of the usefulness of Portuguese municipalities’ financial reporting for the decision-makers. From a more practical perspective, knowledge concerning financial reporting usefulness can help regulatory bodies to improve the current model of municipal financial reporting in future reforms of Local Government



accounting, bearing in mind the experience of internal decision-makers of Portuguese municipalities.

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## APPENDIX

**Table: Results factor analysis for dependents variables**

	Factor Loadings	Eigenvalues	% of variance	Bartlett's test	KMO	Cronbach's alfa	Communalities
<b>Variable 'usefulness of the Local Government financial reporting'</b>				<b>80.077.504</b> (Sig: 0.000)	<b>0.911</b>	<b>0.755</b>	
<b>Factor usefulness of the notes to the financial statements</b>	<b>12.017</b>		<b>44.840</b>			<b>0.951</b>	
2.7 Order Accounts Statement		0.829					0.709
2.8 Treasury Operations Statement		0.808					0.684
2.19 Current and Capital Transfers Statement – Revenue		0.795					0.881
2.13 Extraordinary Income Statement		0.778					0.714
2.17 Current and Capital Transfers Statement – Expenditure		0.778					0.849
2.12 Financial Income statement		0.776					0.703
2.9 Statements of Gross Fixed Assets and Accumulated Depreciations and Adjustments		0.773					0.702
2.15 Investment Multi-annual Plan Modifications Statement		0.763					0.799
2.14 Budgetary Modifications statement – Expenditures and Revenues		0.754					0.773
2.16 Administrative Procurement Statement – Contracts Situation		0.754					0.649
2.18 Statement of Grants Given		0.748					0.875
2.20 Obtained Grants Statement		0.747					0.862
2.21 Fixed and Variable Income Assets Statement		0.721					0.634
2.10 Cost of Goods Sold and Materials Consumed Statement		0.704					0.702
2.6 Cash Flow Statement		0.684					0.579
2.11 Production Variation Statement		0.666					0.681
2.22 Indebtedness Statement		0.446					0.622
<b>Factor usefulness of the consolidates financial statements</b>	<b>3.171</b>		<b>11.745</b>			<b>0.947</b>	
5.2 Consolidated Balance Sheet		0.886					0.871
5.3 Consolidated Income statement by nature		0.883					0.865
5.5 Consolidated Management Report		0.882					0.848
5.4 Notes to the Consolidated Balance Sheet and to the Consolidated Income Statement		0.876					0.844
<b>Factor usefulness of the statements of budgetary information and budgetary execution statements</b>	<b>2.054</b>		<b>7.608</b>			<b>0.870</b>	
2.5 Annual Execution Statement of Investment Multi-annual Plan		0.721					0.774
2.4 Budgetary Control Statement – Expenditures and Revenues		0.713					0.767
2.3 Investment Multi-annual Plan		0.704					0.704
<b>Factor usefulness of the statements of patrimonial, financial and economic information</b>	<b>1.726</b>		<b>6.934</b>			<b>0.901</b>	
2.1 Balance Sheet		0.709					0.768
2.2 Income Statement by Nature		0.662					0.741
<b>Factor usefulness of report</b>	<b>1.103</b>		<b>4.084</b>			-	
2.23 Management Report		0.381					0.558
<b>Variable 'information based in accrual basis'</b>						<b>0.975</b>	
<b>Factor Balance Sheet</b>	<b>13.196</b>		<b>78.75</b>	<b>7.098.288</b> (Sig: 0.000)	<b>0.947</b>	<b>0.972</b>	
<b>Factor Income Statement by Nature</b>	<b>11.846</b>		<b>74.34</b>	<b>6.231.649</b> (Sig: 0.000)	<b>0.944</b>	<b>0.944</b>	