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Accounting information quality and decision-usefulness of governmental financial reporting

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Abstract

Purpose - This paper aims to provide an assessment of the decision-usefulness and quality of governmental financial reports in Greece under the recently adopted modified-cash basis. The evaluation is performed within the wider debate regarding the actual benefits of a transition toward an accounting paradigm that lies closer to accrual accounting as the Greek modified-cash basis borrows several accrual characteristics.

Design/methodology/approach – The transition to modified accruals is analyzed through the prism of the new institutional theory. The approach adopted builds on the characteristics of the accounting information pertaining to the conceptual frameworks of public and private sector accounting standard setting bodies. The assessment is conducted on the basis of the perceptions of public sector financial information users on a Web-based questionnaire.

Findings - The findings provide empirical evidence, albeit of moderate magnitude, in favor of the benefits associated with a move to full accruals.

Originality/value - The study moves the debate on the merits of accounting systems' changes toward the worldwide witnessed trajectory a step forward by providing practical evidence on the matter.

Keywords Greece, Perceived usefulness, Accounting information quality, Governmental financial reporting, Modified-cash basis of accounting

Paper type Research paper

1. Introduction

During the past decades, the concept of New Public Financial Management (NPFM) serves the quest to make the public sector more efficient and effective through the use of financial management techniques. In this realm, central governments internationally try to modernize their accounting systems (Lapsley et al., 2009). These accounting reforms respond to the requests for accountability, transparency and decision-usefulness of the information provided by the public sector raised by numerous users (Kober et al., 2010). The calls for improvement in the quality and usefulness of accounting data have been intensified as a result of the recent global financial crisis. The individual reforms in governmental accounting systems might eventually succeed or fail, but the reform processes remain an ongoing phenomenon (van der Hoek, 2005) in the quest for modernizing the public sector.



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Meditari Accountancy Research Vol. 25 No. 1, 2017 pp. 95-113 © Emerald Publishing Limited DOI 10.1108/MEDAR-10-2015-0070 Although the level of success in implementing accounting reforms in the public sector undoubtedly varies, the achievement of the objectives of governmental financial reporting could be used as a benchmark for assessment purposes. The conceptual frameworks developed by the four most quoted accounting standard setting bodies [i.e. the Governmental Accounting Standards Board (GASB) in the USA, the Canadian Institute of Chartered Accountants (CICA), the Australian Accounting Standards Board (AASB) and the International Public Sector Accounting Standards Board (IPSASB)] largely coincide on the objectives of financial reporting; they unanimously agree on the need for financial statements providing useful information to users. The usefulness of accounting information is, however, subject to the accounting basis on which it is reported because the latter appears to affect decision-making (Bergmann, 2012), although the recent trend indicates a generalized move to accrual accounting.

Nevertheless, there is an ongoing debate as to whether accrual accounting is indeed the solution to the public sector accounting riddle (Carlin, 2005). On one hand, there are several supra-national agencies such as the International Monetary Fund (IMF), World Bank and Organization for Economics Cooperation and Development (OECD) recommending a move to accrual (Paulsson, 2006; Ellwood and Newberry, 2007). On the other hand, there are many who support the opposite view that the application of accrual accounting by governments that are not ready, in terms of culture and technical ability, to understand its implications could lead to the exact opposite results, such as loss of financial control and difficulties in coping with a more complicated system (Hepworth, 2003; Wynne, 2007).

By following the international trend and at the same time by reacting to the turbulent financial environment with the pressing demand for high-quality and useful governmental financial information, the Greek Central Government proceeded in reforming its financial reporting systems. In 2011, the modified-cash basis of accounting superseded the cash basis, as an interim step before moving to accrual accounting (Ministry of Finance, 2009; PwC, 2014). As will be argued later, Greece reacted to both mimetic and coercive isomorphic pressures that resulted in this decision.

In the present study, an evaluation of the outcome of this transition is performed by assessing the perceived usefulness and quality of the accounting information provided by the Greek Central Government's modified-cash basis of accounting. The evaluation is conducted within the wider debate regarding the actual benefits/costs of the transition from cash accounting to an accounting paradigm that lies closer to accrual accounting. The process is viewed through the prism of the neo-institutional theory (DiMaggio and Powell, 1983) which captures the isomorphic pressures to change. The present study contributes to the literature by providing practical evidence on the debate on the merit of accounting systems' changes toward the worldwide witnessed trajectory. The Greek case could be particularly useful to other countries that are considering bringing their accounting systems closer to accrual. It is further interesting to examine the Greek Government's reform attempts during a period of extensive financial turbulence[1] when both the pressures to change from resource providers (i.e. the Troika) and the need to overcome the severe debt crisis make the achievement of successful changes the only viable solution.

The performed assessment treats users as the best judges of these attributes. As noted by Christiaens (2003), the opinion of governmental accounting users plays a key role in the process of accounting change. The methodology is applied through a Web-based questionnaire on the financial statements of the Greek Central Government for 2011 (i.e. the first year of the new system's application). This study contributes to the relevant studies on usefulness in the public sector (Brusca Alijarde, 1997; Kober *et al.*, 2010) – by using insights stemming also from the private sector literature. This comes in line with the European

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Commission's (2013) suggestion that governments need to achieve the same high quality of financial reporting as the private sector firms. On a parallel level, the differences in the perceptions of different user groups are analyzed, aiming at providing additional insights on the interrelations between public sector financial reporting and users' needs and interests, given that the reported evidence so far is rather vague. The fact that citizens perceive the usefulness of accounting information compared to other users differently has significant implications on the format and content of governmental financial statements that should be taken into consideration by policy makers.

The paper is organized as follows. In the following section, the relevant literature is presented. Section 3 presents the methodology applied and analyzes the development of the survey's instrument, whereas Section 4 presents the findings. Finally, the study concludes with remarks, limitations and future research potentials.

2. Literature review

Disclosure of information is considered to be more important in the public sector in comparison to the private sector, mainly because of the absence of a market (Guthrie, 1998; Mack and Ryan, 2007). As explicitly stated in the conceptual frameworks of accounting standard setting bodies, the objective of financial reporting by public sector entities is to provide information about the entity that is useful to users (GASB, 1987; AASB, 2009; CICA, 2009b; IPSASB, 2013a). In this context, *usefulness* is generally determined in relation to decision-making and accountability (Rutherford, 1992). Guthrie (1998) argues that despite public sector accounting being often characterized as neutral to decision-making, in reality, it is neither socially nor politically or economically neutral. What, moreover, appears to affect decision-making is the nature of the accounting basis on which accounting information is produced (IPSASB, 2011; Bergmann, 2012).

After analyzing evidence from various countries, Pollitt and Bouckaert (2004, p. 71) concluded that a pattern emerges in the use of accounting bases: although in the beginning there is a traditional cash-based accounting system, at the end there is a move to full accrual accounts. On the way to full accrual, two modified-accounting bases usually constitute interim steps to the transition, the modified-cash basis and the modified-accrual basis of accounting.

2.1 Pros and cons of a transition to accrual

Although the witnessed – during the past thirty years – reforms in the public sector that are aimed at increasing its efficiency and effectiveness are generally labeled under the term New Public Management (NPM) (Hood, 1991), they are not homogeneous. In practice, they present significant variations in terms of adoption and introduction among different countries (Hood, 1995). This comes as a result of factors such as the culture of the adopting country (Sharma et al., 2012) as well as the political will and commitment in introducing the reforms (Barzelay and Gallego, 2010). Therefore, resistance to change in adopting NPM-influenced reforms is witnessed in various cases around the world (Cohen and Karatzimas, 2014; An and Sharma, 2015).

The financial management techniques related to NPM policies are often referred to as NPFM. The adoption of, or the transition to, accruals has been given a central role in the NPFM reform movement (Lapsley, 1999; Christiaens and Rommel, 2008) in both developing and developed countries (van Wyk, 2007; Sharma *et al.*, 2014). Among the most quoted and advertised advantages of applying accrual accounting to financial reporting is the improvement of the financial information system (Christiaens *et al.*, 2010), the long-term sustainability of fiscal policies and the efficient management of public assets and liabilities (Barton, 2009). Accrual accounting is considered to improve comparability of financial

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performance and accountability of public resources (Guthrie, 1998, Christiaens et al., 2010; IPSASB, 2011). The accrual financial statements are viewed as easier to understand (Brumby et al., 1999) and harder to manipulate (Buti and Guidice, 2002), leading to better information for planning, financial management and decision-making purposes (Athukorala and Reid, 2003).

The aforementioned benefits of accrual accounting have motivated many governments to prepare the ground for a transition to the new system (Khan and Mayes, 2009). Brusca et al. (2015) indicate that several central governments in Europe have already moved to accruals. As Carlin (2005) comments, though, the widespread adoption of accrual accounting does not mean that the reform has been accepted without considerable debate and skepticism. Paulsson (2006) and Anessi-Pessina et al. (2008) refer to a significant number of public sector empirical studies in which the introduction of accrual accounting is criticized and questioned. There are many scholars who consider a transition to accruals as being problematic (Barton, 1999; Christiaens and Wielemaker, 2003; Connolly and Hyndman, 2006; Lapsley et al., 2009). According to Hepworth (2003), the failure to understand accrual accounting requirements may jeopardize the whole transition process. More specifically, the lack of cultural willingness to accept the reform as well as the technical ability to understand, implement and maintain the reform constitute characteristics that would probably lead to a reform failure (Hepworth, 2003). As a result, assessing the costs and benefits of adopting accrual accounting is a difficult task (Christensen, 2002). There are various factors that affect the process of introducing accrual accounting which makes this reform a rather costly one. At the same time, the advertised benefits from such a move make this decision a rather appealing one. As a consequence, careful consideration is required to balance whether this move is worth taking or not. Therefore, further empirical evidence from accounting systems reforms that a move closer to accrual accounting is necessary.

2.2 Users of public sector financial information

Another dimension to the significance of financial reporting in the public sector emerges from the fact that public sector accounting has to satisfy the needs of a large number of different users (Hernández and Pérez, 2004). Satisfying their needs has some prerequisites; firstly, it requires the identification of the users and their needs. Secondly, it asks for the matching of the information needs of users with the information provided by the statements or, alternatively stated, it requires users considering at least some of the information disclosed in the statements to be useful (Gaffney, 1986). As different user groups are recognized as having different information needs (Lüder, 1992), they might also view and assess the information provided in a different manner. Moreover, the production, the provision and the understanding of accounting information are more complicated than just providing information "when a specific decision has been identified that needs it" (Jones, 1992; p. 260).

Mack and Ryan (2007) note that there have been internationally numerous attempts to determine the relation between public sector financial reporting and the recognition of potential users. Using Anthony's (1978) work on behalf of the Financial and Accounting Standards Board (FASB) as a starting point, many researchers followed a normative approach in identifying the users of public sector accounting information (Drebin et al., 1981; Jones et al., 1985; Hay and Antonio, 1990; Daniels and Daniels, 1991; Coy et al., 1997; Priest et al., 1999; Mack and Ryan, 2006). These studies identified the following user groups: governing bodies, investors and creditors, resource providers, oversight bodies and constituents (Mack and Ryan, 2007). The four public sector accounting standard setting bodies that are used in the present study recognize in their conceptual frameworks the user

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groups that fall into the above categories (GASB, 1987; CICA, 2009a; AASB, 2009; IPSASB, 2013a).

Within this framework, the search of who actually uses public sector annual reports has been characterized as a "recurrent ambition" (Skaerbaek, 2005) and "somewhat chimerical" (Hay, 1994). Most importantly, citizens who constitute the prominent group of users (Daniels and Daniels, 1991) appear to make limited use of governmental financial statements in practice (Zimmerman, 1977; Jones, 1992; Herawaty and Hoque, 2007). Although Hay (1994) points out that previous research indicates relatively few actual users of public sector financial reporting, Mack and Ryan (2007) provided evidence of an increased emphasis in public sector organizations on financial reporting, as a means to further engage with their users. Therefore, further evidence on the relation between users and financial reporting in the public sector is required.

2.3 The Greek case

The Greek Central Government's decision to move away from the cash basis of accounting and adopt the modified-cash basis of accounting came as a response to recommendations from IMF and OECD (IMF, 2006; Ministry of Finance, 2009). According to the literature (Hiltebeitel, 1992; Parry, 2010), the modified-cash basis is considered to provide increased information compared to the cash basis, as well as key information that is required for fiscal management (Parry, 2010). The Greek Ministry of Finance identified the necessity of the change on the basis of the weaknesses evident in the existing cash accounting system. The cash system had several shortcomings including the lack of information quality mainly because of the non-recording of a wide range of accounting data as assets or liabilities, the difficulties faced by users when trying to understand the information provided and the lack of reliable information regarding government's operations costs (Ministry of Finance, 2009; p.104). The above limitations advocate that cash accounting is insufficient for decision-making purposes (Bergmann, 2012).

Within this context, the first step toward the goal of accrual accounting adoption was to improve the existing cash basis system. The Greek Government declared that the objectives of the accounting paradigm change were the provision of more useful information, the improvement of transparency and the strengthening of the accounting information quality (Ministry of Finance, 2009; p.108).

Because modified-accounting systems are not formal systems, each country operationalizes them according to its own needs. In the Greek case, modified-cash basis borrows several characteristics from full accrual while it adopts several others stemming from cash. Cohen et al. (2015) describe the new accounting basis as a hybrid that has been built by getting bits and pieces from different accounting standards, with principles of cash and accrual accounting mingled together, with clear influences from international accounting standards (mostly International Financial Reporting Standards (IFRS) and to a lesser extent International Public Sector Accounting Standards (IPSAS)). Among other particularities, the Greek modified-cash basis treats acquisitions of fixed assets as assets and not as expenses, while at the same time, it does not allow for fixed assets' depreciation (depreciation is only executed for "expenses of perennial depreciation"). This provision holds, however, only for newly acquired fixed assets because there is no registration and valuation of fixed assets that were already in the portfolio of the Greek Government's property before 2011 (the first year of modified-cash implementation). Because of the non-presentation of public property values on 2011's balance sheet, equity has a negative value. Under a quite different regime, the financial statements reported until 2010 following the cash basis of accounting used a different format from that of the budget, while at the same

5,1 sheet, although named "assets" and "liabilities", had little to do with the proper use of the relevant concepts used in accounting (Ministry of Finance, 2009). Table I presents the basic characteristics of the modified-accounting financial statements and the accounting principles followed.

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3. Theoretical framework and research approach

The process of the move to a modified-cash basis is viewed through the lens of the neo-institutional theory. According to the neo-institutional theory, an organization reacts to the pressures it receives from its institutional environment (DiMaggio and Powell, 1983). These environmental pressures represent the socially accepted way to act and can direct the choice of procedures or structures from the organization (Meyer and Rowan, 1977). Isomorphism is the process which makes organizations resemble each other, leading to an increased similarity in adopting practices (DiMaggio and Powell, 1983). These institutional isomorphic pressures may have three expressions: coercive, normative and mimetic. Coercive isomorphism refers to the imposing of rules or procedures on an organization by other organizations on which it depends, for instance, financial institutions and fund providers as the IMF. Normative isomorphism derives from pressures coming from professional groups and networks. Finally, mimetic isomorphism refers to the mimicking on behalf of an organization, of practices that were successfully implemented in other organizations. All three expressions of isomorphism affect organizations' choices. In the Greek case, the choices are made within an environment that is particularly affected by

time, they contained additional information. The accounts used in the cash-based balance

Elements of reporting	2011–Modified cash basis
Financial statements	Statement of financial position
	Statement of financial performance
	Statement of changes in net assets/equity
	Statement of cash flows
	Accompanying notes
Assets	Non-current assets:
	Equipment, fixed assets in the course of construction, investments and expenses of perennial depreciation
	<i>Note</i> : No information on public property
	Current assets:
	Debtors, doubtful debtors and prepayments
	Cash and cash equivalents
Liabilities	Public debt
	Other long-term loans
	Short-term liabilities:
	Creditors and provisions
Revenues	Revenues are recognized independently of the receipt period. Revenues are recognized when certain and of fixed amount
Expenditures	The expenses are recognized independently of the payment period provided that
•	they fall into the following categories:
	Expenses other than those made for the purchase of fixed assets, for
	investments and interest payments
	Expenses of continuous nature (e.g. lease rentals)
	Purchase of inventories
	Accrued expenses for which provisions are conducted at the end of the year (e.g. public debt interest)

Table I.
Characteristics of the Greek financial statements under the modified cash basis

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coercive and mimetic isomorphic pressures. More specifically, not only was the Greek Government influenced by the NPFM movement and expressed willingness to follow the trend of changes in other European countries (mimetic isomorphism), but at the same time, the change was strongly suggested by external organizations such as the IMF and the OECD (coercive isomorphism).

As the scope of the change in the accounting basis was to provide information of higher quality and usefulness to users, the present study aims to assess whether this goal has been achieved in practice. The main research questions that arise are the following:

- RQ1. Did the change of the accounting basis lead to the provision of high-quality accounting information?
- RQ2. Did the change of the accounting basis lead to the provision of useful accounting information?
- RQ3. Do different user groups perceive in a different manner the qualitative characteristics and decision-usefulness of the information provided by the governmental financial statements?

To answer the above set of questions, a survey instrument, building on methodologies applied to the private and the public sector, has been developed. The instrument was applied to the Greek Central Government financial statements of 2011, that is, the first year of modified-cash basis application. The instrument aimed at the measurement of accounting information quality and decision-usefulness.

3.1 Assessing quality

Although a plethora of studies addresses the quality of financial reporting in the private sector, this research area is rather underdeveloped in the public sector. Most of the private sector studies deal with value relevance focusing on stock market prices (Barth *et al.*, 2001; Nichols and Wahlen, 2004) and earnings management (Healy and Wahlen, 1999; Van Tendeloo and Vanstraelen, 2005). Other surveys study financial reporting quality through assessing the emphasis put on fair values (Hirst *et al.*, 2004), internal control and risk disclosure information (Beretta and Bozzolan, 2004), auditor's reports (Gaeremynck and Willekens, 2003) or corporate governance (Cohen *et al.*, 2004). The non-profit orientation of the public sector entities, however, results in the majority of methodologies applied to the private sector for assessing the quality of governmental financial statements not being relevant and suitable. Only the surveys that address the qualitative characteristics of financial reporting based on the frameworks developed by FASB and IASB could be applicable (Jonas and Blanchet, 2000; McDaniel *et al.*, 2002).

The four international standard setting boards for the public sector recognize a set of qualitative characteristics that should be evident in the financial reporting for the latter to be useful[2] (GASB, 1987; AASB, 2009; CICA, 2009a; IPSASB, 2013a). Table II presents an overview of the qualitative characteristics of the accounting information recognized by the public and private sector standard setting boards.

With the exception of some limited differences, the qualitative characteristics for the public sector are almost identical to the ones identified for the private sector. After all, the primary roles of accounting information are the same for both the non-profit and the for-profit sectors (Hofmann and McSwain, 2013). In most cases, the differences may be more a matter of terminology and less of substance. For example, although IPSAS identify "reliability" as a qualitative characteristic of accounting information, for reasons of alignment with the IASB, the conceptual framework uses the term "faithful representation" instead of "reliability". Actually, even the joint project of IASB and

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FASB prefers the term "faithful representation" for reasons of better common understanding (IASB, 2010). At the same time, the meaning of "consistency" is close to that of "comparability". Finally, "verifiability" appears as part of reliability/faithful representation as it helps users assuring that information "faithfully represents the economic and other phenomena that it purports to represent" (IPSASB, 2013a; p.29). It could be concluded, therefore, that the four public sector accounting frameworks broadly agree on the following quality characteristics of financial information: relevance, understandability, comparability, timeliness and reliability/faithful representation.

Because of the similarities of the qualitative characteristics of accounting information recognized in both sectors, we build on the research conducted in the private sector on the quality of financial reporting and adapt it to the public sector. More specifically, to assess the accounting information quality, McDaniel *et al.*'s (2002) methodology is applied enriched with insights from the Jonas and Blanchet (2000) proposed framework for assessing financial reporting quality, both developed for the private sector. Based on these two methodologies, the overall governmental financial reporting quality is assessed in terms of relevance, faithful representation and understandability of the financial statements. Apart from the overall assessment, a more in-depth analysis is conducted by assessing the predictive value, feedback value, faithful representation, understandability, verifiability, neutrality and completeness of five distinct financial items reported in the financial statements (i.e. total assets, total debt, receivables and payables, revenues and expenditures).

3.2 Assessing perceived usefulness

To assess the perceived usefulness of accounting information, the instrument developed by Larcker and Lessig (1980) is applied. According to Larcker and Lessig (1980; p. 122), perceived usefulness is "the usefulness attributed to an information item by a decision-maker for a specific decision-making process". This instrument has already been used in studies referring to the public sector and, in particular, to local governments (Gaffney, 1986; Daniels and Daniels, 1991). Larcker and Lessig's (1980) model aims at measuring two aspects of perceived usefulness, namely, perceived importance and perceived usableness, both in relation to a particular decision context. Perceived importance refers to "the quality that causes a particular information set to acquire relevance to the decision maker", whereas perceived usableness refers to "the information quality that allows a decision maker to utilize the set as an input for problem-solving" (Larcker and Lessig, 1980; p. 123). In the present study, the respondents were called to assess (i.e. to decide on) the financial condition of the Greek Central Government based on the information disclosed in the financial statements.

Characteristics	GASB	Public secto IPSASB	or boards AASB	CICA	Private sector boards CF joint project IASB – FASB
Relevance	1	1	/	/	✓
Understandability	1	1	/	✓	✓
Comparability	✓	✓	/	✓	✓
Timeliness	1	1	_	_	✓
Consistency	1	_	_	_	
Reliability	1	_	/	✓	
Faithful representation	_	✓	_	_	✓
Verifiability	_	✓	_	_	✓

Table II.Qualitative characteristics of accounting information

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3.3 Assessment tool

The survey instrument has been operationalized in the form of a Web-based questionnaire. The development of the Web tool was considered necessary because of a large number of pages comprising the financial statements (64 pages). The tool aimed at making the presentation of the information more user-friendly and easily accessible[3]. For this reason, the respondent was first only given the balance sheet and income statement of 2011. Each item reported in the financial statements has been developed as a hyperlink. Therefore, by clicking on an item (e.g. Debtors) all the additional information and notes regarding this specific item (e.g. the accounts comprising the Debtors account and explanatory notes for each one of them as well as the relevant text commenting on the accounts), in whichever page they were placed on the report, would appear in a pop-up window. In this way, the respondent was given the ability to browse through all the additional information he/she needed to review, without having to search among numerous pages. Having all the necessary information available, the respondent was asked to complete the questions of the survey instrument at his/her convenience and in whatever order fitted best.

3.4 Questionnaire structure

The questionnaire had three sections. In Section 1, the respondents were asked to rate seven elements comprising the reporting quality characteristics (i.e. predictive value, feedback value, verifiability, faithful representation, completeness, neutrality and understandability) for five distinct financial items found in the balance sheet and the income statement (i.e. total assets, total debt, receivables and payables, revenues and expenditures). Comparability and consistency were not included in the instrument's questionnaire because the Greek financial statements did not provide information for previous periods[4]. Timeliness has also been excluded because it was considered to be out of the scope of the Greek governmental financial statements as the statements are published with a considerable delay. The financial statements of 2011 were published in October 2012, whereas the cash-based statements of 2010 were published in September 2011. In Section 2, the respondents were asked to rate the balance sheet and the income statement at an overall level, that is, to provide feedback on their perceptions regarding overall financial reporting quality, overall reliability, overall relevance and overall understandability. Finally, in Section 3, respondents had to rate the usefulness of the financial statements if they had to express an assessment of the financial condition of the central government. In all cases, the scale used for the measurements was from 1 to 7, where 1 indicates the "minimum" level of quality or "totally disagree" or "none" and 7 indicates the "maximum" level of quality, "totally agree" or "all", respectively.

3.5 The sample

The users sample used to evaluate the quality and usefulness of the financial statements included users from all main user categories recognized by public sector accounting standard setting bodies, that is, citizens[5], investors and creditors, public sector executives and oversight bodies' executives. All respondents were expected to have accounting knowledge and to be familiar with financial reporting; they could be, therefore, characterized as having the necessary skills to evaluate (Milne and Chan, 1999).

For the purpose of the study, we approached accounting professors in Greek universities, six auditing firms (including the Big Four), four large accounting offices, five economic newspapers, six big banks, the General Accounting Office, accounting departments of various ministries and four oversight bodies[6]. In total, 114 responses were received. However, 19 of them were not complete and were therefore excluded from the analysis. Eventually, the government accounting statements have been assessed by 95 respondents. The distribution of the responses is presented in Table III.

All respondents had sufficient knowledge or expertise in accounting, but less than one-third claimed any expertise in public sector accounting (Table IV).

4. Results

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RQ1 tests the provision of high-quality accounting information as a result of the transition to modified-cash accounting. The respondents were at first asked to rate specific elements of financial reporting quality focusing on specific financial items of the financial statements. They were expected to answer these questions after having carefully analyzed the statements. They were then asked to rate the overall information quality on the balance sheet and the income statement. However, for presentation reasons, results are presented in the reverse order.

4.1 Quality of the financial statements at the overall level

The respondents were asked to rate the overall financial reporting quality, overall faithful representation, overall relevance and overall understandability of the balance sheet and income statement for the period. The ratings are presented in Table V.

Both statements under the modified-cash basis receive scores above the mean value. However, these scores are indicative of only a moderate level of quality provided by the accounting information.

4.2 Elements of governmental financial reporting quality

The conduction of an in-depth analysis of the qualitative characteristics of the financial statements was based on a separate set of questions. The results are presented in Table VI.

Status		Total
Citizens		51
Professionals (certified auditors, business consultants and accountants)	34	
Academics, researchers and press journalists	17	
Public sector executives		18
Investors and creditors		14
Oversight bodies		12

Table III. Distribution of responses

Level of knowledge		counting $V = 95$	Public sector accounting $N = 95$		
Minimum	-	=	32	33.7%	
Sufficient	50	52.6%	40	42.1%	
Expert	45	47.4%	23	24.2%	

Table IV.
Level of accounting knowledge
_

Overall quality level	Balance sheet	Income statement
Overall financial reporting quality	4.86	4.93
Overall faithful representation	4.74	4.77
Overall relevance	4.76	4.80
Overall understandability	5.07	5.09

Table V.Overall quality level (mean values)

Notes: The scale is a 1-7 scale, where 1 = minimum and 7 = maximum; N = 95

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The assessment reveals scores above the mean value. From a closer look, it is evident that although the level of understandability is noticeably high, the predictive and feedback values of the information have low scores. This could indicate that although the provided information is quite understandable to users, it does not succeed in meeting the other improvement expectations.

4.3 Assessment of decision-usefulness

RQ2 tests the provision of useful accounting information as a result of the transition to modified-cash accounting. To evaluate the perceived usefulness, the respondents were asked to use the financial information provided by the statements to assess the financial condition of the central government. For this purpose, they answered two sets of questions. The first set of questions (Table VII) measured perceived importance, whereas the second set (Table VIII) measured perceived usableness. According to Larcker and Lessig (1980, p. 123), each one of these two dimensions "bears a logical relationship to perceived usefulness". The mean value of the responses to each set of questions was used to compose the index of perceived importance and the index of perceived usableness, respectively.

The scores of the indices reveal that the perceived importance of the accounting information provided by the modified-cash basis is once again just above the average (mean value: 4.81).

The same stands as regards the perceived usableness of the accounting information. As perceived importance and perceived usableness constitute dimensions of perceived usefulness, accounting information prepared under the modified-cash basis receives scores just above average; therefore, the assessment of perceived usefulness does not indicate a fundamental change. It turns out that accounting information disclosed is not enough sufficient to serve corresponding purposes.

Qualitative characteristic	Total assets	Total debt	Receivables and payables	Expenditures	Revenues	
Predictive value	4.37	4.43	4.35	4.48	4.41	
Feedback value	4.57	4.66	4.58	4.56	4.64	
Verifiability	4.74	4.86	4.73	4.83	4.84	
Faithful representation	4.71	4.83	4.68	4.83	4.87	
Completeness	4.87	4.93	4.74	4.78	4.95	
Neutrality	4.67	4.79	4.64	4.71	4.73	Table VI.
Understandability	5.18	5.23	5.05	5.14	5.25	Elements of financial reporting quality
Notes: The scale is a 1-7	scale, where 1	= minimum	and $7 = \text{maximum}; N = 95$			(mean values)

It would be extremely difficult to assess the financial condition without at least the information	
presented	4.99
The information presented is sufficient to assess the financial condition	4.48
What portion of the information presented is essential for or instrumental in assessing the financial	
condition?*	4.95
Index of perceived importance	4.81

Notes: The scale is as follows: 1 = totally disagree, 4 = neutral and 7 = totally agree, except for *where 1 = none, 4 = about half and 7 = all; N = 95

Table VII. Perceived importance (mean values) **MEDAR** 25.1

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4.4 Users' perceptions

Finally, RQ3 tests whether different groups of users perceive in a different manner the qualitative characteristics and decision-usefulness of the government financial statements' information. The users of accounting information constitute a research topic in the public sector accounting literature that has attracted considerable interest (Cov et al., 1997; Mack and Ryan, 2007). According to Skaerbaek (2005), as the production and publication of financial reporting are resource-consuming, it is important to know whether the stakeholders do actually make use of them. Moreover, it might be of equal importance to know the perceptions of the users on the usefulness and the quality of these reports as well. Different user groups have different information needs. They might also have a different focus for their evaluation. Table IX presents the assessments made by each of the four user groups regarding the balance sheet and the income statement at the overall level.

By analyzing each group separately, interesting outcomes are revealed. In all cases, citizens rate with lower scores the qualitative characteristics of the new financial statements compared to all other users. To better understand the differences in the assessment scores among the four groups, a one-way analysis of variance (ANOVA) test was conducted. The results present evidence of the existence of statistically significant differences at 5 per cent in terms of faithful representation of the balance sheet (significance = 0.042), as well as the faithful representation and understandability of the income statement (significance = 0.026 and 0.031, respectively) between the groups of citizens and oversight bodies' executives. Non-parametric tests (Kruskal – Wallis test) confirm these results. It appears that citizens

Extremely complex recalculations or adjustments are necessary to use the information presented	
to assess the financial condition* (reverse coded)	4.18
What portion of the information presented is in the correct form for the assessment of the financial	
condition?	4.88
What portion of the information presented is interpretable without any recalculation or	
adjustment for the assessment of the financial condition?	4.67
Index of perceived usableness	4.57

Table VIII. Perceived usableness

Notes: The scale is as follows: 1 = none, 4 = about half and 7 = all, except for *where 1 = totally disagree, 4 = neutral and 7 = totally agree; N = 95

User group	Overall financial reporting quality	Overall faithful representation	Overall relevance	Overall understandability
Balance sheet				
Citizens ($n = 51$)	4.65	4.43	4.55	4.82
Public sector ($n = 18$)	5.11	5.00	4.94	5.50
Investors $(n = 14)$	5.00	4.93	4.79	5.14
Oversight $(n = 12)$	5.25	5.42	5.33	5.42
Income statement				
Citizens ($n = 51$)	4.71	4.47	4.63	4.80
Public sector ($n = 18$)	5.17	5.17	4.94	5.50
Investors $(n = 14)$	5.00	4.79	4.93	5.21
Oversight $(n = 12)$	5.42	5.42	5.17	5.58

Table IX. quality level

Mean values of overall Notes: The scale is a 1-7 scale, where 1 = minimum and 7 = maximum; statistically significant differences among groups indicated with italic-type letters

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trust less and understand less the information in financial statements compared to oversight bodies' executives.

Citizens are the group which rates with the lowest scores the majority of the quality characteristics of all examined financial items. The highest scores, in general, are given by the public sector and oversight bodies' executives. Moreover, the lowest scores of all groups refer to the predictive and feedback value of the financial information, both of which fall within the wider "relevance" concept (results not tabulated).

Moreover, citizens and investors perceive the new financial statements as providing information of lower importance for decision-making compared to the other two groups (Table X). When it comes to usableness, all groups give low rates. The difference on perceived importance proved to be of statistical significance at the 5 per cent level (one-way ANOVA test; significance = 0.032) between the groups of citizens and public sector executives, citizens and oversight executives, investors and public sector executives as well as investors and oversight executives. Non-parametric Kruskal – Wallis test results provide evidence of the same statistically significant differences.

The differences in the perceptions of citizens and investors show that these groups require more or differently presented information. In every case, statistically significant differences are revealed among groups that actually use the information (public sector executives and oversight bodies) and groups that do not use it (citizens and investors) as part of their routine.

5. Discussion and conclusions

NPFM tools adopted by central governments for accountability and transparency purposes have been brought to the forefront because of the global financial crisis. Isomorphic pressures constitute a catalytic factor that urges countries to move forward toward the adoption of systems that meet these expectations. In this realm, the present paper evaluates the outcome of the adoption of the modified-cash basis of accounting for financial reporting, as an interim step after cash and before accrual accounting implementation, in Greece, The decision of the Greek Government was affected by the globally evident accounting change trends as well as by the strong suggestions made by international organizations. Therefore, mimetic and coercive isomorphism could justify the decisions made. The evaluation is conducted within the wider debate on the actual benefits and costs associated with the move to full accruals. More specifically, in this study, an evaluation of the quality and perceived usefulness of financial reporting at the central government level under the modified-cash basis of accounting is performed. The starting point for this evaluation is the fact that although ambitious reforms take place in the public sector accounting systems, the outcomes might not eventually be the desired ones for the users of the accounting information (Hepworth, 2003; Wynne, 2007). The consideration that the objective of financial reporting in the public sector is to provide information that is useful to users for decision-making and accountability purposes has been used as the benchmark for assessment. For these purposes,

Index of perceived importance	Index of perceived usableness	
4.66	4.46	
5.19	4.70	
4.48	4.79	
5.25	4.64	
	4.66 5.19 4.48	

Notes: The scale is as follows: 1 = minimum, 4 = average and 7 = maximum

Table X.
Mean values of perceived importance and usableness

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a Web-based instrument has been developed to gather responses aiming at assessing the quality and usefulness of the accounting information provided by the Greek Central Government modified-cash basis. The development of the instrument has been informed by the qualitative characteristics recognized by the public sector accounting standard setting bodies and relevant research works (Larcker and Lessig, 1980).

The findings reveal several indications of a reform with moderate results with regard to the quality of the provided accounting information, as it corresponds to just above average quality levels. Therefore, although a positive evaluation of the quality of financial reporting can be diagnosed, it is not a fundamental one. The accounting change did not lead to financial statements achieving the high level of quality of accounting information as expected by governmental officials. The same stands for perceived usefulness. The results indicate that, still, after the transition, the provided information is only moderately necessary and not sufficient, requiring various adjustments before becoming usable. Therefore, it could be implied that the well-advertised advantages of a move closer to accrual accounting (Barton, 2009; Christiaens *et al.*, 2010) are still not met in the Greek case.

The four examined user groups (i.e. citizens; public sector executives; investors and creditors; and oversight bodies' executives) present various differences on the way they evaluate the information, which points out certain differences among users who actually use this information as part of their routine and those who do not. In all cases, citizens gave the lower scores. In total, the rates given for the "understandability" of the new financial statements were noticeably higher, compared to other qualitative characteristics. On the contrary, the lowest rates were given to the "feedback" and "predictive" values, which constitute elements of "relevance". It could be, therefore, presumed that the new statements fail to give a depiction of the financial condition of the country. Because the majority of the respondents did not claim expertise in public sector accounting, similarities and familiarity with the private sector financial statements structure could have contributed to the characterization of the modified-cash statements as being adequately qualitative and useful. This is supported also by the fact that "understandability" receives higher rates.

Public sector and oversight bodies' executives appear to be more satisfied with the change. However, this cannot be claimed for the other user groups. This finding may be interpreted as a need to provide accounting information in a different manner to other user groups who are not keen on, or familiar with, public sector accounting or accounting in general, as happens with the majority of citizens[7]. At the same time, the finding that investors evaluate the outcome of the accounting reform, in terms of decision-usefulness and information quality, with scores close to the mean value of the scale has several implications. For a country that tries to overcome a severe financial crisis by attracting international investors mainly through a major privatization program and restoring the credibility of its financial profile, the fact that the new accounting system produces reports of moderate quality is not a desirable outcome. Nevertheless, signaling change and a move to best practice accounting tools (e.g. accrual accounting) might have had potentially numerous beneficial outcomes to the government in terms of attracting international funding flows. On the other hand, it would be a costly transition (PwC, 2014).

Several studies have concluded on an inadequacy of accrual accounting in meeting users needs (Paulsson, 2006; Kober *et al.*, 2010). However, the poor evaluation may be the result of poor implementation. Deeper analysis is necessary for tracking down why the reforms did not succeed in achieving their purpose. The same holds true for the Greek case. In our study, the first signs of the assessment of the modified-cash basis are evident. The results of the assessment have several practical implications for policy makers of other countries that are in the process of considering a move closer to accrual accounting. A subsequent analysis

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could reveal whether the level of satisfaction changes throughout time and in what direction. Moreover, alternative ways of presenting this information to a wider audience of citizens, so as to enhance their active participation and to keep them informed, should be sought. A study focused on this dimension could shed light on whether the format of the presentation of the information *per se* and not its accounting substance affects the perception of the quality and decision usefulness of the information.

Finally, we have to acknowledge that the size and heterogeneity of the sample users may cast doubts on the generalizability of our findings and conclusions. A viable research venue, to shed more light on the characteristics that make accounting information more useful and relevant for decision-making purposes, could include in-depth interviews with users. Moreover, differences in perceptions among users would be further analyzed through non-conventional survey methods such as experimental analysis.

Notes

- Greece has been considerably hit by the global financial crisis. In an attempt to avoid bankruptcy, Greece had to enter the financial support mechanism of the European Commission, the European Central Bank and the IMF, commonly called the Troika, in 2010 (Law 3845/2010).
- These qualitative characteristics are not applicable only for accrual accounting. They are also recognized in regards to the cash basis. For example, consult the "Cash basis IPSAS" (IPSASB, 2013b).
- 3. The characteristics of the questionnaire that succeeded in materializing these qualities could be summarized as follows: there were definitions available for all quality characteristics found on the questionnaire accessible through a help button, and the questionnaire was constantly available to respondents to complete while browsing through the financial statements as it comprised half of the screen on the Web-based tool. The Web-based tool can be found at the following link: http://195.2 51.253.37/Governmental_Accounting_Evaluation/, and it is in Greek.
- Comparative information is presented after the first year of implementation. The 2012 statements include comparative information of 2011.
- Citizens correspond to the so-called "interested" or "informed" citizens, terms used in literature to describe citizens groups with interest in governmental financial reporting (Gaffney, 1986; Daniels and Daniels, 1991).
- Ministries: Ministry of Finance, Ministry of Interior, Ministry of Defence and Ministry of Education; Oversight bodies: Bank of Greece, Hellenic Competition Commission, Hellenic Capital Market Commission and Hellenic Accounting and Auditing Standards Oversight Board.
- 7. This practice becomes more popular among governments. In the USA, for example, the federal government produces a "citizen's guide" to its annual financial report, and many local governments issue similar reports.

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