

FINANCIAL ACCOUNTING REFORM IN GREEK PUBLIC HOSPITALS: AN EMPIRICAL STUDY OF THE IMPLEMENTATION

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Abstract

During the last decades, many countries worldwide have introduced financial accounting reforms at one or more levels of government by replacing or transforming their traditional budgetary cash accounting systems into an accrual based accounting system in order to increase accountability and financial transparency. This paper presents an overview of the current financial accounting reform towards a new accounting system, which combines cash and accrual accounting information, in the Greek public health sector. The focus is on the concept of the reformed financial accounting legislation and on the cross-sectional differences in the level of adoption and implementation of the new accounting system in Greek public hospitals. Our analysis is based on an empirical survey that was conducted via questionnaires during 2008 on a sample of 132 Greek public hospitals. The empirical examination revealed the perceived usefulness of the accrual accounting system in producing and presenting adequate accounting information to users for decision-making purposes as well as a lot of implementation problems in the early stage of hospital financial accounting reform.

JEL classification: M4, M48.

Key words: Accrual Accounting, Public Sector Accounting, Public Hospitals, New Public Management.

INTRODUCTION

During the last decades the public demand for radical changes towards the improvement of public sector activities resulted in a massive wave of organizational, managerial and accounting reform in the public sector and jurisdictions worldwide (Christiaens, 2008). Many of these reforms show a number of characteristics often summarized in terms of New Public Management (NPM). The NPM is a management philosophy used by governments to transform and modernize their public sector in order to enhance the efficiency, effectiveness and accountability of public services delivery by transplanting private sector management practices and techniques to the public sector (Lapsley, 1988; Potter, 2002; Van Helden, 2005). Within the context of NPM, several countries have adopted financial accounting reforms at one or more levels of government by replacing or transforming their traditional budgetary cash accounting systems to systems that support accruals, an accounting basis that is widely used by businesslike organizations, in order to increase financial accountability and transparency (Pessina and Steccolini, 2007; Blidisel, and Tudor, 2007; Aljarde, 1997; Christiaens, 1999 and 2001; Christiaens and Rommel, 2008; Christiaens and Peteghem, 2004; Hoque and Moll, 2001; Johnsen, 1999; Lapsley, 1994; Montesinos and Vela, 2000; Paulsson, 2006; Pallot, 1997 and 2001; Pettersen, 1999; Richardson and Cullen, 2000; and Venieris and Choen, 2004).

This change of public accounting systems towards accrual accounting seems necessary as the traditional budgetary cash accounting system is perceived nowadays as no longer satisfactory mainly due to the lack of a general financial picture and of adequate management information (Koen, 2007; Lapsley, 1999).

According to Christiaens et al. (2004, 2007) the governmental accounting reform was often the first phase of reforming governments and that is why it can be considered as an important condition and prerequisite for the success of the other consequent governmental reforms of NPM transformation international wave, such as organizational and managerial reforms. Therefore, an effective and successful implementation of the accounting reform plays an important and significant role in the success of implementing other NPM practises and techniques within public organizations. (Christiaens and VanPeteghem, 2007).

The Greek public sector, within the context of NPM and following the example of numerous other countries in Europe and worldwide, has encountered a number of financial accounting changes and reforms over the last ten years. As a result, in 1997 the Greek government started introducing the accrual based accounting

system and double-entry bookkeeping method to several public sector organizations. The most important examples of Greek public sector entities that an accounting reform took place towards accrual accounting are: Social securities funds (1997), Public law entities (1998), local government institutions, municipalities, (1999) and finally public owned hospitals (2003).

In the public sector accounting international literature, the transition to the accrual basis of accounting initiative is claimed to have a number of benefits, which can be grouped and summarised as follows : (i) identification of costs of services and political programmes; better measurement of costs and revenues; enhancement of control process and transparency (ii) greater focus on outputs; focus on the long-term impact of decisions (iii) more efficient and effective use and management of resources; greater accountability on the use of resources (iv) reduction of public expenditure; depiction of the true and accurate financial position (v) better financial management and greater comparability and evaluation of managerial and organizational performance ; greater attention to asset management; and more complete information on public organisations' liabilities. (Mellett, 2002; and Olsen et al., 2001; Barrett, 1993; Evans, 1995; Pallot, 2000; Mellor, 1996; Alijarde, 1997; Barzelay, 1992; Moe, 1994; Venieris and Choen, 2004; Choen et al., 2007; Aucoin, 1995; Pessina and Steccolini, 2007; OECD, 2005; and IFAC PSC, 2000, pp. 7–10).

However, it should be stressed that an increasing body of researchers are sceptical about the adoption of accruals accounting by public organisations and believe that the above accounting framework is often accompanied by difficulties and implementation problems. These problems may arise due to vague accounting objectives, standards and treatments that usually derive from unclear aspects of accounting legislation, such as the valuation and recognition of assets, the measurement of depreciation of physical assets and amortization of intangible assets and the recognition of income and expenses. (Christiaens, 2001; and Hepworth, 2003; Christiaens and Rommel, 2008; Jones and Pendlebury, 1991; Choen, Kaimenaki and Zorgios 2007).

As Cohen (2007) mentions, a second group of problems, when altering accounting systems from cash to accrual basis accounting, is related to organizational parameters. Examples of these parameters comprise the inadequacy of software and personnel resources and experience to implement accrual accounting, the lack of accounting training with shortage of skills and expertise, the absence of motivation and incentives for accrual accounting adoption and the insufficient political and Top Management Support and commitment, (Choen et al., 2007; Pallot, 1997; Pendlebury and Karbhari, 1998; Guthrie, 1998; Stanton and Stanton, 1998; Newberry, 2002; Carlin and Guthrie, 2003; Hodges and Mellett, 2003; and Alijarde, 1997) .

In order to reap the full benefits of switching to accrual accounting it is important to take into account the above frequently cited problems and shortcomings of public accounting reform and trying to control and resolve them, otherwise, the adoption of the accrual based accounting system may be delayed or impeded.

The purpose of this paper is to present experiences from Greek attempt to introduce accrual and management accounting practices and techniques into public entities and especially into public owned hospitals that are part of the Greek National Health System (NHS) and examine the finance directors' perceptions about the benefits derived from the reform but also, problems encountered.

This objective derives from the fact that little evidence has been presented about the views of practicing accountants and finance officers regarding this initiative. The empirical examination revealed a lot of implementation problems in the early stage of the hospital financial accounting reform.

The remainder of the paper proceeds as follows. The next section presents a short description of the Greek National Health System (NHS) and the financial accounting reforms that took place during the last ten years. The third section describes the methodology applied in this study. The presentation of the research results is found in section four. The paper conclusions drawn from the research are set out in the final section.

THE GREEK NATIONAL HEALTH SYSTEM HOSPITAL SECTOR

Greek public hospitals have been confronted with a plethora of organizational, administrative and financial reforms since the mid of the 1980s in the name of improved efficiency, effectiveness, and accountability.

The Greek health care system can be characterised as a mixed System in which the National Health System (NHS), a compulsory social insurance, and the voluntary private health insurance system co-exist. The Greek NHS was established in

1983 under the Law 1397/83 which declared that health is a “social good” and all citizens should have the right to be offered high quality health care. Therefore, the objective of NHS was to provide free, equitable and universal health care coverage to citizens based on the principles of equity, equal access to health services and solidarity.

At a central governmental level, the Ministry of Health and Social Cohesion (MHSC) is responsible for the provision of health care and the development of a national strategy for health. More specifically, the MHSC sets strategic priorities at national level, defines the extent of funding for proposed activities and finally, allocates the necessary resources.

In 2001 a new organizational and administrative NHS reform (Law 2889/01) was enacted. The reform includes several structural changes such as the operation of 17 Regional Health Authorities (D.Y.Pe) and the establishment of new managerial structures and businesslike (private-sector) efficiency tools and techniques in public hospitals like cost-improvement programmes, performance indicators, financial management information systems and Global and departmental Budgets (WHO, 2005). Under the spirit of decentralisation the 17 D.Y.Pe are responsible for implementing national health priorities at regional level, coordinating regional activities and organizing and managing the delivery of health care and welfare services within their geographical area through the health care units (Hospitals, Health Centres, social care units, etc) .

Health care expenditures in Greece are funded mainly through the central annual government budget (general taxation), the numerous state insurance funds (compulsory employer and insured people contributions) and private insurance schemes (voluntary payments). Hence, the Greek NHS can be characterised as a “dual” system, in which elements from both the Bismarck and the Beveridge model co-exist. In 2006, Greece’s total spending on health accounted for 9.1% of GDP, slightly above the average of 8.9% in OECD countries, of which an extremely high 4.1% accounted for private health spending.

Health care services, in the public sector, (mainly Secondary and tertiary health care) are provided in 132 general and specialized public hospitals operate within the NHS. The public owned hospitals of NHS have a total capacity of 34.134 beds, according to data presented in Table 1.

Table 1. Number of NHS Hospitals per Health Region

Health Regions / Regional Health authorities	No of Beds	%	No of Hospitals	%	No of Health centers	%	No of social care units	%	No of Employees	%
1 ⁿ	9.291	27,22%	27	20,45%	8	4,10%	6	6,52%	27.567	28,07%
2 ⁿ	5.421	15,88%	20	15,15%	23	11,79%	14	15,22%	13.977	14,23%
3 ⁿ	4.044	11,85%	17	12,88%	17	8,72%	8	8,70%	10.340	10,53%
4 ⁿ	4.919	14,41%	15	11,36%	34	17,44%	16	17,39%	13.806	14,06%
5 ⁿ	2.420	7,09%	13	9,85%	32	16,41%	13	14,13%	9.032	9,20%
6 ⁿ	5.725	16,77%	31	23,48%	67	34,36%	26	28,26%	16.749	17,05%
7 ⁿ	2.314	6,78%	9	6,82%	14	7,18%	9	9,78%	6.747	6,87%
Total	34.134	100%	132	100%	195	100%	92	100%	98.218	100%

ACCOUNTING REFORM IN THE GREEK HEALTH SECTOR

Traditionally, Greek governmental budgeting and accounting at all three levels of government, central, regional and local, is regulated by law and not by any external standard-setting professional body and is still based upon a cash principle and accounting basis. During the last years, efforts have been made from the government to change these budgetary principles towards accrual basis of accounting to central, regional and local government public entities.

The accounting regulations for Greek public hospitals, dated back to 1974 with the legislative decree 496/74, were based on a budgetary and single-entry bookkeeping accounting system and had a primarily cash basis accounting approach. The main purpose and concern of the hospitals budgetary cash accounting system was to register transactions and use the authorised budgets, driven by budgetary principles, and to control the execution of the budget approved by the governmental decision makers. On the other hand, little attention was given to providing a complete picture of the financial position and financial performance of public health organizations.

That is why, the Greek management literature has long pointed out the need for the reform of the accounting system in the health public sector and encouraged the switch to accruals accounting⁴ (Ballas and Tsoukas, 2000; Venieris and Koen, 2003) as nowadays, the traditional budgetary accounting is viewed as 'outdated', no longer satisfactory and making a significant contribution to the inefficiency and ineffectiveness of the Greek public sector.

The initial efforts of introducing the accrual basis of accounting in public hospitals commenced in 1997 with the Law 2519/97. This Law presented for the first time the government's attempt and intention to introduce double-entry bookkeeping and cost management methodologies in public hospitals.

The development and preparation of an Official Health Sector Accounting Plan (HSAP), aimed at developing the conceptual framework for accrual accounting in public hospitals, was assigned by the Ministry of Economy and Finance to the national Council of Accounting (ESYL) and to the Chamber of Finance (OEE).

The HSAP mainly included broad guidelines regarding principles for accrual basis accounting implementation, similar to those applied to the private sector, the charts of accounts, asset classification, examples of journal entries, templates of the layout and the content of the published financial statements (i.e. balance sheet, income statement, cash flow statement, The Statement of Income Distribution, Budget report and Actual report,) and suggested financial ratios (Venieris and Koen, 2004).

Furthermore, a pilot implementation project, under the experimentation clauses of the HSAP, commenced in 1999 in order to test the suitability of the new accounting system and its readiness for full implementation. Five Public owned hospitals that would implement the HSAP as pioneers were selected.

The governmental efforts to reform the accounting system of the health sector escalated in 2003, after taking the pilot implementation experiences into account and making the necessary modification to the HSAP, when a law, the Presidential Decree 146/03 (P.D. 146/03), was passed. The P.D. 146/03 enforced the mandatory adoption of the new accounting system, based on accrual accounting, to all public hospitals that are part of the Greek NHS. However, the previous traditional budgetary cash accounting system was not totally abandoned but instead, the public hospitals just added accrual accounting system separately and most of the budgetary accounting principles were maintained (Christiaens, 2001). The new accounting framework of the P.D. 146/03 defined two accounting systems that should work in parallel under two independent accounting cycles within the same general ledger and while each one would still retain its autonomy. The legislator believed that the solution of introducing this combined approach, for accrual accounting and budgetary cash accounting, of two separate accounting systems should be the most beneficial in order to reap the best of the two accounting systems, as each one has its own strengths and weaknesses. The simultaneous existence of the two accounting regimes, accrual and cash, was evaluated as necessary due to different accounting objectives and processes that have to support. The former system is aiming at reporting the financial position and the yearly profit and loss statement of hospitals and the latter system is aiming at authorizing and controlling of public spending (Christiaens and Rommel, 2008).

The P.D. 146/03 pointed out that the deadline for the implementation of accrual financial accounting in public hospitals was the 1st of January 2005, while the deadline for cost accounting introduction was the 1st of January 2006.

METHODOLOGY

The principal area of investigation is to present the rate of adoption of the accounting reform as well as the problems regarding the implementation of the new accounting system. To determine all the above a survey using questionnaires was conducted during 2008 in all Greek public hospitals in order to gather the necessary data. The questionnaire was sent by e-mail and Fax to 132 finance directors working within the public hospitals accounting and finance departments, on the understanding that they are the key actors that used the new accounting system Eventually, out of 132 distributed questionnaires, 54 were returned, a response rate of 41% health units covering all the regions of the country (see table 2). In order to analyze the data collected the SPSS version 14 was used as the most common statistical package.

Table 2. Coverage Ratio of answered questionnaires per Health Region

<i>Health Regions</i>	<i>Total Number of Hospitals</i>	<i>No of Hospitals answered the questionnaire</i>	<i>% of Hospitals answered the questionnaire</i>
1 st Attiki	27	11	40,7%
2 nd Peiraia- Aigaio	20	8	40%
3 rd Makedonia	17	10	59%
4 th Anat. Makedonia & Thraki	15	5	33%
5 th Thessalia - Sterea Ellada	13	3	24%
6 th Peloponnisos - Ionia Nisia - Dytiki Ellada	31	13	42%
7 th Kriti	9	4	44%
Total number	132	55	41%

SURVEY RESULTS

Prior to the presentation of the research findings, we would like to refer to the demographic characteristics of the public hospitals that are comprised in the sample. Table3 shows the hospitals profile, such as, geographical residence, financial turnover, number of employees and no of beds.

Table 3. Demographic Characteristics of public hospitals sample

Residence of the Hospital	Frequency	Hospitals capacity (No of Beds)	Frequency	Hospitals Financial Turnover (Euro)	Frequency	Number of employees	Frequency
Attiki - Peiraia- Aigaio	19	below 100	17	0 -3.000.000	15	0 - 100	9
Makedonia & Thraki	15	from 101 to 350	17	3.000.000 - 15.000.000	14	101 - 400	12
Thessalia - Sterea Ellada	3	351 - 500 beds	5	15.000.000 - 30.000.000	6	401 - 700	12
Peloponnisos - Ionia Nisia - Dytiki Ellada	13	above 501	15	30.000.000 - 50.000.000	2	above 701	21
Kriti	4			above 50.000.000	17		
Total	54	Total	54	Total	54	Total	54

As displayed in Table 4, even though the accrual basis financial accounting system has been adopted and used by 45 out of 54 (83,3%) public hospitals, which is quite satisfactory rate, on the other hand, only 10 out of 54 (18,5%) hospitals had developed and adopted an operating cost accounting system. However, according to our survey data, another 32 (60%) hospitals are in the process of developing and implementing a cost accounting system that will be completed by the year 2010. Despite the fact, that the deadline, imposed by the Presidential Decree 146/03, concerning cost accounting system implementation was formally the 1st January, 2006, the remaining 12 (23%) hospitals answered that the introduction of such an accounting system was not for them an option even in their future plans

Table 4. Implementation Rate of accrual accounting systems

	YES	NO
Financial accrual accounting (N = 54)	83,3%	16,7%
Cost accounting (N = 54)	18,5%	81,5%

In Table 5 we present the perceptions of financial directors regarding the usefulness of the new accounting system in producing and presenting adequate accounting information for decision-making purpose

Table 5. Results of respondents' perception regarding the usefulness of the financial information provided by Accrual Basis financial accounting system

Benefits	Percentage of Hospitals					Mean	St deviation
	1*	2	3	4	5		
Improved decisions based on accurate, relevant, and reliable information	4,4%	8,9%	13,3%	33,3%	40,0%	3,96	1,147
Improved disclosure of the true and accurate financial position	0%	2,2%	13,3%	48,9 %	35,6%	4,18	0,747
Provides enough financial data to facilitate the control process	2,2%	13,3%	22,2%	35,6%	26,7%	3,71	1,079
Provides enough data to facilitate the determination of cost and performance of services	0%	11,1%	24,4	33,3%	31,1%	3,84	0,999
Reduction of public expenditures	6,7%	20%	17,8%	33,3%	22,2%	3,44	1,235
Increased Efficiency and effectiveness use of resources	0%	13,3%	28,9%	24,4%	33,3%	3,78	1,064
Improved Transparency and accountability	4,4%	15,6%	28,9%	24,4%	26,7%	3,53	1,179
Increased comparability of output among departments and organizations	6,7%	8,9%	26,7%	33,3%	24,4%	3,60	1,156

*Notes: scale 1 = strongly Disagree to 5 = strongly Agree

Respondents have quoted a number of benefits regarding the accrual accounting system adoption. As indicated in Table 5 the most important perceived benefits are the "Improved disclosure of the true and accurate financial position" (Mean 4,18), the "Improved decisions based on accurate, relevant, and reliable information" (Mean 3,96) and the "Provides enough data to facilitate the determination of cost and performance of services" (Mean 3,84).

On the contrary, the variables that do not seem to have influenced the respondents to a great extent and received the lowest rating are the "Reduction of public expenditures" (Mean 3,44) and the "Improved Transparency and accountability" (Mean 3,53). It seems that accrual accounting adoption in the public hospitals does not have an important effect in public expenditures reduction.

Moreover, the respondents of the Health units that implemented the accrual accounting system stated, as displayed in table 6, that it was a difficult and time and resource consuming project accompanied by many organizational difficulties and implementation obstacles.

Table 6. Results of respondents' perception regarding the difficultness of Accrual accounting implementation process

	Percentage of Hospitals					Mean	St deviation
	1*	2	3	4	5		
The implementation process of Accrual accounting system	40,0%	22,2%	28,9%	4,4%	4,4%	2,11%	1,133
(N=45)	(18)	(10)	(13)	(2)	(2)		

*Notes: measured on scale 1 = very difficult to 5 = Very easy.

That is why, the accrual accounting implementation must be an "easier" process to hospitals that employ a larger number of finance and accountant officers. In order to confirm it, we created two groups, the first contains observations from hospitals that employ less than 15 finance and accountant officers and the second contains observations from these ones that employ more than 15 officers and then, we used the T-Test measure in order to compare the means of the two variables. The results in table 7 indicate that there is a statistical significant difference ($t = -3,252$, sig. =0,002) between the two group means at 5% level, suggesting the existence of a size effect.

Table 7. Results of respondents' perception regarding the difficultness of Accrual accounting implementation process based on finance and accounting Dept. employees (Independent Samples T Test)

		Number of employees within finance and accounting department		
		N	Mean	Std. Deviation
The implementation process of Accrual accounting system	Below 15 employees	23	1,73	0,827
	Above 15 employees	22	2,74	1,214
Mean Difference	- 1,01			
t-test	-3,252			
Sig. (2-tailed)	0,002			

*Notes: measured on scale 1 = very difficult to 5 = Very easy.

The difficulties that the public hospitals had to face during the implementation process regarding the accrual accounting system are presented in the Table below.

Table 8. Results of respondents' perception regarding problems of adopting and implementing accrual basis financial accounting

Problems	Percentage of Hospitals				Mean	St deviation
	1*	2	3			
Insufficient political and Top Management Support and commitment	62,2%	33,3%	4,4%		1,42	0,583
Personnel's complaints and reluctance against change	13,3%	53,3%	33,3%		2,20	0,661
Selection of accounting software	42,2%	48,9%	8,9%		1,67	0,640

Problems	Percentage of Hospitals				
	1*	2	3	Mean	St deviation
lack of additional resources and manpower	15,6%	37,8%	46,7%	2,31	0,733
Absence of incentives to implement such a system	20,0%	73,3%	6,7%	1,87	0,505
lack of knowledge and expertise to implement such a system	20,0%	37,8%	42,2%	2,22	0,765
Absence of clear accounting objectives and standards (ie, valuation policy for fixed assets)	22,2%	48,9%	28,9%	2,07	0,720
lack of accounting training	20%	48,9%	31,1%	2,11	0,714

*Notes: scale 1 = no problems encountered to 3 = significant problems encountered

The analysis of the answers in Table 8 revealed that the most highly-rated problems regarding the adoption of accrual basis of accounting appeared to be the “lack of additional resources and manpower” (Mean 2,31), the “lack of knowledge and expertise to implement such a system” (Mean 2,22) and the “Personnel’s complaints and reluctance against change”. The areas that were indicated by the public hospitals sample as the ones being less problematic are the “Insufficient political and Top Management Support and commitment” (Mean 1,42) and the “Selection of the appropriate accounting software” (Mean 1,67).

CONCLUSIONS

This paper presents the “journey” of introducing an accrual and management accounting system to NHS in Greece and examines its diffusion rate. Our findings, based on a sample of 54 public owned hospitals, indicate that the adoption rate (83%) of the accrual basis of accounting in public health sector is quite satisfactory, regarding the financial accrual accounting system, compared to the adoption rate (18,5%) of the cost accrual accounting system the implementation of which has not yet seriously progressed almost 6 years after the declared NHS accounting reform (P.D. 146/03).

Furthermore, the present study is trying to investigate the usefulness level of the accrual accounting system in producing and presenting adequate accounting information for decision-making purposes as well as the perceived obstacles and problems concerning the implementation of this new accounting system.

More specifically, the majority of the respondents agree that the accrual-based accounting system is very useful in producing and providing adequate financial information to users and stakeholders regarding the overall picture of hospitals financial position, the evaluation of hospital’s performance, the real level of liabilities, the determination of full cost of services delivered, the improvement of hospitals assets management and decision making process.

According to our survey results, the most significant problems and difficulties that adopters encountered during the change to the accrual-based accounting system are the inadequacy of resources, the personnel’s shortage of knowledge on accrual accounting principles and standards, the personnel’s resistance to change, the lack of adequate training and the absence of incentives for accrual basis accounting adoption.

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