

The impact of Kallikratis Project on Accrual Basis Accounting of the First Degree Local Authorities: A Financial Analysis of the Municipalities of the Prefecture of Aitoloakarnania

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In this paper an attempt is made to analyze the financial position of the 7 first degree local authorities of the Prefecture of Aitoloakarnania after Kallikratis Project. For this purpose, all municipalities of the Prefecture were chosen, for the years 2011-2012 (the first years of the implication of Kallikratis project) for analyzing 18 financial ratios. The results showed that there might be an inefficient management of the local authorities which probably leads to future cash flow problems. Furthermore, there are indications that cash inflows are collected too slowly compared to payments.

Keywords: Financial Ratios, Municipalities, Kallikratis Project, Greece.

1. INTRODUCTION

In the past decades, issues related to the accounting analysis of the activity of public organizations have attracted significant interest. At the moment, the primary accounting system of Public Sector is based on the traditional system of cash-based accounting. In this system, transactions are recorded when there is an actual cash flow related to them. Revenues and expenses are acknowledged only when received and paid, which means that the necessary element for acknowledgement is the cash flow. On the contrary, in an accruals-based accounting system, the accounting system that is commonly used by private sector businesses to date, revenues and expenses are recorded at the time they are created, namely transactions are acknowledged as soon as a revenue collection right or a debt payment obligation is established. Although private and public sector businesses set different goals - the private sector aims at profit and effectiveness, while the public sector aims at the effective provision of public services (nonprofit organizations) - during the last years, the Greek public sector has gradually started to adopt the accounting methods and practices used by the private sector.

The accrual-based accounting system of the Greeks first degree local authorities based on the P.D. 315/99. Considered like a step-by-step guide for the implementation of the double-entry system in Local Authorities and for the publication of the annual financial statements.

By the Kallikratis Project the local government reformed administrative division of Greece in 2011 and redefined the boundaries of self-government units, the method of election of the institutions and their responsibilities. The ultimate goal of this effort was through administrative shrinking until then vast first-degree Local Authorities, to reduce their operating cost and become more effective. For this purpose in the Prefecture of Aitoloakarnania 29 municipalities merged to 7 in the name of retrenchment public expenditure.

In this framework, the goal of this study to analyze indicators, with the primary method of financial analysis of private sector businesses, to portray the financial state of 7 municipalities of the Prefecture of Aitolokarnania, for the fiscal years (FY) 2011-2012, namely during the first two years of implementation of the Kallikratis Project on first-degree Local Authorities, under the accrual accounting system.

2. LITERATURE REVIEW

The use of financial ratios is a standard tool for conducting comparative evaluations between companies in the private sector. For the Public Sector particularly, has been recommended, for the analyzing the annual published financial statements through the use of ratios (Anthony and Young, 2003, Wilson and Katellus, 2004, Verne, 1992; ICMA, 2003).

The assessment of the financial situation of public sector organizations are more complex than assessing the efficiency of a private enterprise, which is based on the analysis of their profitability through interpretation of ratios used. This occurs so as to draw conclusions for public bodies required subjective judgments about complex interactions of social, organizational and financial factors given that not-for-profit organizations. Generally, criteria like economics, geography and demographics of a municipality are key components of their financial situation, as major determinants of the capacity of local authorities to be consistent with their financial obligations and their obligations to provide services. Factors beyond the control of the administration of municipalities such as location, population and wealth of the municipality have been shown to affect the values of ratios (Venieris - Cohen, 2010).

According to Niarchos (1997, p. 32), there are three ways analysing a company's financial statements:

- (a) The vertical analysis method,
- (b) The temporal analysis method and
- (c) The ratio method of analysis.

Usually, what we essentially try to examine through ratio analysis are the following parameters of a company or organization (Athanasopoulos et al, 2007):

- **Liquidity:** liquidity reflects the ability of the company to respond to its obligations, and then these are due. In the framework of such an assessment, we try to assess the ability of a company to respond in a period of harsh financial conditions, which may be brought about by a decline of activity, or a strike of the staff.
- **Stability:** the term stability expresses the ability of a business to pay interest and amortization of long-term loans, and to normally distribute dividends, both to its preference shares and its common shares.
- **Effectiveness:** the term effectiveness expresses the relation between the profits made in an accounting year and the capital used in this year for its realization. For an in depth analysis, the rating and assessment of effectiveness, first, the study of the nature and the amount of profits, its regularity and its tendency of development is required. Second, in more detail and particularly if the findings of the first study are not satisfactory, a study of the extent of use and management of assets (velocities), of the rate of gross profit, of the rate of net profit is required.

3. DATA AND METHODS OF ANALYSIS

3.1. DATA

Its data refer to selected items of the balance sheets of all the municipalities (7 totally) of the prefecture of Aitoloakarnania. All of them were liable for the keeping of double entry method and published their annual financial statements, for years 2011 and 2012, following the implementation of P.D. 315/199.

3.2. ANALYSIS METHOD

In order to analyze the annual financial statements of the examined municipalities, we will use ratios, in particular those of liquidity, activity, efficiency and profitability.

3.2.1. Liquidity ratio analysis

Table 1 presents the liquidity ratio analysis for the municipalities of Prefecture of Aitoloakarnania. These ratios measure the potential of the municipality to pay short-term obligations.

As observed the municipality of Aktiou – Vonitsas needs about the double working capital from municipality of Agrinio – the biggest municipality of the Prefecture. Both municipalities of Naypaktias and Xiromerou need for the fiscal year 2012 about the double working capital in relation to the previous year. The Current and Acid ratios are equal because all municipalities, except for Amfilohia, do not maintain inventories. The best value for these two ratios is above 1. All the municipalities have very good liquidity evaluation because they have very high debtors. There is a discrepancy between the time of collection of receivables and payment of liabilities. The municipalities pay about three times faster their obligations from time recipient their requirements. It is surprising because many municipalities (like Aktiou – Vonitsas, Ieras Poleos Messolonghiou and Xiromerou) need about 2 years or more to collect their requirements.

Table 1. The Liquidity Ratio Analysis

Municipality	Fiscal Year	Working Capital	Current Ratio	Acid Ratio	Average collection period (days)	Average Payment Period (days)
Agrinio	2011	1.443.579,74 €	1,18	1,18	198	66
	2012	2.749.288,14 €	1,35	1,35	231	73
Aktiou - Vonitsas	2011	4.360.686,38 €	5,97	5,97	553	53
	2012	4.674.549,65 €	7,12	7,12	898	39
Amfilohias	2011	455.767,86 €	1,38	1,32	246	38
	2012	1.977.692,67 €	5,95	5,80	262	13
Ieras Poleos Messolonghiou	2011	1.806.664,08 €	1,29	1,29	591	128
	2012	1.504.833,16 €	1,20	1,20	726	143
Naypaktias	2011	1.252.678,10 €	1,48	1,48	157	70
	2012	2.514.344,94 €	1,84	1,84	179	68
Thermou	2011	-483.408,75 €	0,50	0,50	124	104
	2012	655.250,78 €	2,34	2,34	279	48
Xiromerou	2011	719.558,11 €	1,55	1,55	308	76
	2012	1.469.088,05 €	2,13	2,13	653	93

3.2.2. Profitability ratio analysis

Table 2 presents the profitability ratio analysis for the municipalities of Prefecture of Aitolokarnania. These ratios measure the ability of the municipality to make profits.

As observed, the Cross Profit Margin ratio has a very high negative value. This is due to the fact that municipalities have very large annual income from the amortization of government grants which the P.D. 315/99 considers the non-operating revenue and the related cost (for construction projects, etc.) are considered operating expenses and are included in the Operating Statement and the income not, therefore negatively affected the operating results.

The transition from 2011 to 2012 adversely affects the profitability of most municipalities, perhaps because of the economic crisis ravaging the whole country and not only. For example the municipalities of Agrinio, Aktio – Vonitsa and Amfilohia had large percentage reduction in their profitability. On the other hand the municipality of Thermo improves his profitability whereas the municipality of Xiromero doesn't.

The municipalities are non-profit organizations and, according to the principles of New Public Management, their purpose is not to create new and large deficits. Therefore, the combination of low profitability with the large funds (assets, grants etc.) invested in Greek municipalities by Central Government, adversely affecting to the ratios ROA and ROE presenting small values.

Table 2. The Profitability Ratio Analysis

Municipality	Fiscal Year	Net Profit Margin	Cross Profit Margin	ROA	ROE
Agriniou	2011	11,10%	-266,05%	0,69%	0,81%
	2012	-39,82%	-279,39%	-2,42%	-2,83%
Aktiou - Vonitsas	2011	96,45%	-165,67%	4,04%	4,21%
	2012	7,60%	-260,18%	0,25%	0,25%
Amfilohias	2011	-4,62%	-414,31%	-0,19%	-0,21%
	2012	-86,87%	-426,10%	-3,57%	-3,85%
Ieras Poleos Messolonghiou	2011	6,23%	-305,66%	0,24%	0,27%
	2012	3,49%	-279,79%	0,12%	0,14%
Naypaktias	2011	11,12%	-195,94%	0,85%	0,93%
	2012	3,61%	-233,36%	0,27%	0,30%
Thermou	2011	14,84%	-368,48%	0,57%	0,61%
	2012	56,02%	-342,07%	2,03%	2,11%
Xiromerou	2011	-72,04%	-384,75%	-2,14%	-2,32%
	2012	-61,80%	-463,45%	-1,40%	-1,52%

3.2.3. Activity ratio analysis

The table 3 below presents the activity ratio analysis for the examinees municipalities. This ratios measure the ability of the administration of the municipality to use productively and effectively the resources and the assets of the municipality.

It's obvious that there is very little efficiency in use of resources and assets of municipalities. For each 1€ invested in the municipality generated sales of 0,02-0,08 €. On the other hand, there is very little dependence on funds from third parties (suppliers, creditors, etc.)

and the operation of municipalities depends solely on the government grant, from the moment the State is the only shareholder. Except the municipality of Agrinio all the other municipalities have percentage of dependence from third parties, fewer than 10%.

Table 3. The Activity Ratio Analysis

Municipality	Fiscal Year	Fixed Assets Turnover	Asset Turnover	Total Liabilities to Owner's Equity	Total Liabilities to Total Assets
Agrinio	2011	0,07 €	0,06 €	15,34%	13,18%
	2012	0,07 €	0,06 €	15,65%	13,41%
Aktiou - Vonitsas	2011	0,05 €	0,04 €	4,33%	4,15%
	2012	0,04 €	0,03 €	3,71%	3,59%
Amfilohias	2011	0,04 €	0,04 €	9,17%	8,36%
	2012	0,04 €	0,04 €	7,27%	6,75%
Ieras Poleos Messolonghiou	2011	0,04 €	0,04 €	9,46%	8,34%
	2012	0,04 €	0,03 €	10,35%	9,13%
Naypaktias	2011	0,09 €	0,08 €	6,83%	6,31%
	2012	0,09 €	0,07 €	8,35%	7,56%
Thermou	2011	0,04 €	0,04 €	6,51%	6,05%
	2012	0,04 €	0,04 €	3,29%	3,16%
Xiromerou	2011	0,03 €	0,03 €	8,03%	7,39%
	2012	0,03 €	0,02 €	7,59%	7,02%

3.2.4. The Altman's Z-score analysis

The Altman's Z-scores are used to predict corporate defaults and an easy-to-calculate control measure for the financial distress status of companies in academic studies. The Z-score uses multiple corporate income and balance sheet values to measure the financial health of a company.

The municipalities of the Prefecture of Aitolokarnania have a very strong position against a possible future bankruptcy by the analysis. This fact may be due to occupation of large assets and large owners' equity is having the municipalities. The weakest but not in the danger zone is the municipality of Agrinio.

Table 4. The Altman's Z-Score

Municipality	2011	2012
Agrinio	6,98	6,61
Aktiou - Vonitsas	25,16	29,01
Amfilohias	11,50	14,41
Ieras Poleos Messolonghiou	11,24	10,26
Naypaktias	15,61	12,99
Thermou	15,68	32,08
Xiromerou	13,01	13,93

4. CONCLUSION

At the end of 2010 the Greek Government by the Law 3582 the so-called Kallikratis project tried to reform administrative division and redefined the boundaries of self-government units, the method of election of the institutions and their responsibilities. The ultimate goal of this effort was through administrative shrinking until then vast first-degree Local Authorities, to reduce their operating cost and become more effective. For example in the Prefecture of Aitoloakarnania 29 municipalities merged to 7.

At the start of 2011 the Kallikratis Project generated new municipalities which are bigger administratively and financially. Today we could say that the purpose of government achieved. In the light of the economic crisis and the ratio analysis of the balance sheets of the municipalities of the Prefecture of Aitoloakarnania we could say the following.

The municipalities have largely economic dependence from state grants. Their whole business operation depends on this money. The result of this practice was the administration of the municipality based on the certainty and confidence that the required working capital will soon receive from the State. On the other hand fearing the political cost take no action to collect the money owed to municipalities by the citizens.

The economic downturn of the state and his citizens probably leads to future cash flow problems. The administration should take appropriate actions to protect the municipality from a potential default on debts.

The financial analysis of municipalities of Prefecture of Aitoloakarnania shows they have common pathogenicity problems. Finally all the municipalities of the Prefecture have the obligation by P.D. 315/1999 to implement the cost accounting system for all of their activities. Until this moment we have no information or confirmation about the implementation stage of cost accounting. The research showed that nobody of the municipalities, except municipality of Amfilohia, maintains stocks or have organized warehouses for their consumable supplies, which is necessary precondition for the implementation of cost accounting system.

The public sector in Greece needs a steady, strong and efficient administration to make it more effective against private sector companies.

For further future research could extend the sample with several municipalities from all over Greece by analyzing financial data for more fiscal years to investigate if there are still the same or other problems of administration and management like Prefecture of Aitoloakarnania.

5. REFERENCES

1. Athanasopoulos, K., Georgopoulos A., Bellas, A., 2007, *Accounting Statement Analysis*, University of Patras.
2. Bellas, A., Kontogeorga, G., Thanasas, G., Papadatos, K., Goulas, D. ,2010, Deviations of Budgetary Data and outcomes of the First Degree Local Authorities: The case of the local authorities in the Prefecture of Achaia for the period 2005 to 2007, *Proceedings of the 3rd International Conference on Accounting and Finance*, August 26-27, 2010, Skiathos Island, Greece, pp. 370-380
3. Benito, B., Brusca I., Montesinos, V. ,2002, "The IPSAS Approach: a Useful Tool for Accounting Reform in Europe?", V. Montesinos, J.M. Vela (eds), *Innovations in Governmental Accounting*, Kluwer Academic Publishers , pp. 85-98.
4. Christiaens, J. and Rommel, J. ,2008, "Accrual Accounting Reforms: Only for the Businesslike (Parts of) Governments", *Financial Accountability and Management*, Vol. 24, No. 1, pp. 59-75
5. Cohen S., 2007, How Different are Accrual Accounting Financial Measures Compared to Cash accounting ones? Evidence from Greek Municipalities, *6th Annual Conference of the Hellenic Accounting and Finance Association*, Patra, December 14-15.
6. Davis, T and Pain, B.,2002,, *Business Accounting and Finance*, McGraw-Hill Publishing Company
7. Edmonds, T. and Edmonds, C.,2000, *Fundamental Managerial Accounting Concepts*, Irwin McGraw-Hill
8. Georgiadis, N. ,2002, The "Lightness" of EBITDA (Earnings before Interest, Taxes, Depreciation and Amortization) and Derived Valuation Indices in the Greek Share Market, *Investment Research & Analysis Journal*, http://www.iraj.gr/IRAJ/IRAJ_EBITDA_11_2002.pdf
9. Georgopoulos, C., 2005, *Financial Management of Enterprises*, Athens: Greek Academy of Business Administration.
10. Glezakos, M., 2006, *Introduction to the Analysis of Financial Statements of Enterprises*, University of Piraeus, Department of Statistics and Actuarial Science.
11. Goldman, F. and Brashares, E. ,1991, "Performance and Accountability: Budget Reform in New Zealand", *Public Budgeting and Finance*, Vol. 11, No. 4, pp. 75-85
12. Guthrie, J. (1998), "*Application of Accrual Accounting in the Australian Public Sector - Rhetoric or Reality*", *Financial Accountability & Management*, Vol. 14, No. 1, pp. 1 - 19.
13. Hepworth, N. (2002), "The European Experience of and Attitudes to the Development of International Accounting Standards", V. Montesinos, J.M. Vela (eds), *Innovations in Governmental Accounting*, Kluwer Academic Publishers, pp. 73-83
14. Hodges, R. and Mellett, H., 2003, "Reporting Public Sector Financial Results", *Public Management Review*, Vol. 5, No. 1, pp. 99-113
15. Hoque, Z. and Moll, J. ,2001, "Public Sector Reform: Implications for Accounting, Accountability and Performance of State-Owned Entities - an Australian Perspective", *The International Journal of Public Sector Management*, Vol. 14, No. 4, pp. 304-326
16. International Federation of Accountants (IFAC) ,1996, *Perspectives on Accrual Accounting*, IFAC Occasional Paper 3, IFAC, New York
17. Kantzos, K. ,2002, *Financial Statement Analysis*. Athens: Interbooks.
18. Kontogeorga G. Thanasas G. Tsianti V., 2013, "The Introduction of the Accrual Accounting System in the Local Government in Greece: A Financial Analysis of the Local Authorities in the Prefecture of Achaia", 3rd National Congress of Applied Economics, Greece, Volos 17-18, No. 5 (2013).
19. Luder, K. ,2002, "Research in Comparative Governmental Accounting over the Last Decade- Achievements and problems", V. Montesinos, J.M.Vela (eds), *Innovations in Governmental Accounting*, Kluwer Academic Publishers, pp. 1-21

20. Matheson, A. ,2002, "BETTER PUBLIC SECTOR GOVERNANCE: THE RATIONALE FOR BUDGETING AND ACCOUNTING REFORM IN WESTERN NATIONS", *Models of Public Budgeting and Accounting Reform*, OECD Journal on Budgeting, *Volume 2, Supplement 1, OECD*, pp. 37-49
21. Monsen, N. ,2002, "The Case of Cameral Accounting", *Financial Accountability and Management*, Vol. 18, No. 1, pp. 39-72
22. Niarchos, N.,1997, *Financial Analysis of Accounting Statements*, 5th Ed. Athens: Stamoulis
23. Pallot, J. ,1996, "Innovations in National Government Accounting and Budgeting in New Zealand", Chan, J.L. et al.(eds), *Research in Governmental and Nonprofit Accounting*, Vol.9, Greenwich, CT.: JAI Press ,pp. 323-348
24. Pallot, J.,1997, "Infrastructure Accounting for Local Authorities: Technical Management and Political Context", *Financial Accountability and Management*, Vol. 13, No. 3, pp. 225-242
25. Pallot, J.,2001, "A Decade in Review: New Zealand's Experience with Resource Accounting and Budgeting" , *Financial Accountability and Management*, Vol. 17, No. 4, pp. 383-400
26. Pina, V., Torres, L, 2003, "Reshaping Public Sector Accounting: an International Comparative View", *Canadian Journal of Administrative Sciences*, Vol. 20, No. 4, pp. 334-350.
27. *Presidential Decree 315/1999 Sectoral Accounting Plan for the Municipalities. (in Greek).*
28. Ross, S., Westerfield, R. And Jaffe, J.,1999, *Corporate Finance* 5th ed., Irwin/McGraw- Hill
29. Ryan, C.,1998, "The Introduction of Accrual Reporting Policy in the Australian Public Sector: An Agenda Setting Explanation", *Accounting, Auditing and Accountability Journal*, Vol. 11, No. 5, pp. 518-539
30. Schinas, O., Lyridis. D., 2002, *Notes on Accounting and Technical Analysis*, Athens: National Technical University of Athens, School of Naval Architecture and Marine Engineering. SSRN: <http://ssrn.com/abstract=906813> (accesseddate: 15/7/2012)
31. Tudor., A., Mutiu, A. ,2006, CASH VERSUS ACCRUAL ACCOUNTING IN PUBLIC SECTOR, *Studia Universitatis Babeş Bolyai Oeconomica*, 1990,
32. Venieris G. - Cohen S., 2010, "The economics of the First Degree Local Authorities: The financial analysis of the annual Statements" *Journal Business*, Vol. 65, p. 1160 (*in Greek*).