GOVERNANCE, COMPETITIVENESS AND PERFORMANCE AFTER MERGERS OF LOCAL GOVERNMENT ORGANIZATIONS IN TURBULENT TIMES

Michail Pazarskis *, Stergios Galanis **, Christos Konstantinidis ***, Sofia Kourtesi **

* *Corresponding author,* Department of Economics, International Hellenic University, Greece
Contact details: Department of Economics, International Hellenic University, End of Magnesias str., Serres 62100, Greece
** Department of Economics, International Hellenic University, Greece
*** Department of Business Administration, International Hellenic University, Greece

OPEN ACCESS

How to cite this paper: Pazarskis, M., Galanis, S., Konstantinidis, C., & Kourtesi, S. (2023). Governance, competitiveness and performance after mergers of local government organizations in turbulent times. *Corporate Governance and Organizational Behavior Review*, *7*(1), 111–120. https://doi.org/10.22495/cgobrv7i1p11

Copyright © 2023 The Authors

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0). https://creativecommons.org/licenses/by/4.0/

ISSN Online: 2521-1889
ISSN Print: 2521-1870

Received: 26.10.2022
Accepted: 10.02.2023

JEL Classification: G34, M41
DOI: 10.22495/cgobrv7i1p11

Abstract

This paper investigates the successful governance or not through accounting performance of local government organizations (LGOs) after mergers as part of the public sector during the period of the economic crisis in Greece. The purpose of this work is to evaluate the performance after the mergers of various LGOs in Greece. More specifically, the analysis of the fifteen largest Greek merged municipalities in terms of economic sizes is done using accounting measures by analyzing their competitiveness and comparing their performance per several time periods, based on their accounting data for the years 2011–2017, i.e., after the mergers that took place since the implementation of the Kallikratis Program that occurred in 2010. The research results showed statistically significant change in the examined accounting measures after the mergers in different phases of the economic crisis period in Greece. From the analysis of the accounting performance, useful conclusions are drawn about the efficiency of each new municipality, since its establishment and for seven years, as well as conclusions from the success of the Kallikratis Program.

Keywords: Mergers, LGOs, Accounting Performance, Accounting Measures, Competitiveness, Greece

Authors' individual contribution: Conceptualization — M.P.; Methodology — S.G. and C.K.; Validation — C.K. and S.K.; Formal Analysis — S.K.; Investigation — C.K.; Resources — S.G.; Data Curation — S.G.; Writing — Original Draft — S.G.; Writing — Review & Editing — M.P. and S.K.; Supervision — M.P.; Project Administration — M.P. and S.K.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

1. INTRODUCTION

The new form of local government should be capable and efficient to provide the citizens of every country with satisfactory services of the 21st century. However, the local government organizations (LGOs), to succeed in the new development role, have to implement new administration strategies derived from new public management (NPM), such as mergers (Hood, 1995; Jansen, 2008); to start to consider competitiveness among other LGOs (Harman & Harman, 2008); and adopt new forms of auditing with financial metrics and accounting data (Galariotis et al., 2016; Pantelidis et al., 2018a; Goeminne & George, 2019). To boost competitiveness, which will contribute to local development, as in every economic unit, in the LGOs (which as a sector of entities has the same meaning as the term of municipalities) it is necessary to use several numerical indicators and accounting measures that could depicture the dynamic and static image of these entities (Dargenidou et al., 2016; Pantelidis et al., 2018b).

In 2010 Law 3852/2010 "New Architecture of Local Government and Decentralized Administration — Kallikratis Program" changed the landscape in the municipalities of Greece in the creation of new LGOs through general mergers of previous municipalities, to highlight their competitiveness and transform them into developmental and efficient providers of local public services. The act of mergers following NPM perspectives was something that happen for many decades in the private sector but with ambiguous results (Mueller, 1980; Kumar, 1984; Cartwright & Schoenberg, 2006; Golubov et al., 2013; Berrioategortua et al., 2018; Grigorieva, 2020). Based on the Kallikratis Program, 325 municipalities were established in Greece (Pantelidis et al., 2018a).

However, Kallikratis' reform was implemented during a difficult period for Greek society. The country had just entered a period of an economic crisis in 2010 with the surveillance of the country's public finances by the International Monetary Fund (IMF), the European Union (EU), and the European Central Bank (ECB) (Pantelidis et al., 2018b). The result of the fiscal imbalance was the demand for immediate positive economic results, an increase in competitiveness, an attempt to increase municipal revenues, and a reduction in the level of expenses due to the adoption of austerity measures and cuts from the central state administration (Pantelidis et al., 2018a; Pazarskis et al., 2019). In these new circumstances and with increased new responsibilities, the Greek LGOs must now fulfill their purpose, within a regime of reduced funding from the Greek central government. Therefore, their effective financial management is particularly important and the only way is the success of positive financial results for the existence of the new municipalities (Pantelidis et al., 2018a).

Based on all the above, the study and analysis of the course of the finances of the most important LGOs in Greece and their analysis in critical accounting measures would be considered of special interest for the years 2011–2017. Thus, by studying these critical accounting data the evolution of success in financial terms of the Kallikratis Program can be evaluated diachronically. Thus, the contribution of the study to the existing literature is bi-fold. Firstly, this study provides new insights into the implications of a merger program in a small European country of the Eurozone, when there is limited literature on this field. Secondly, it points out new practices and areas of special interest for the financial success of LGOs for practitioners, state authorities, and administrative audit organizations.

The structure of the remainder of this paper is as follows. Section 2 focuses on issues related to the Kallikratis Program and reviews the literature on municipal financial management. Section 3 fixes the accounting measures that will be used to analyze the data and characteristics of the LGOs under study, and Section 4 analyzes the results. Finally, Section 5 summarizes the various findings from the study of the municipalities in our sample.

2. THEORETICAL FRAMEWORK

2.1. Local government in Europe and Greece

In Europe, local government, depending on the size of the country, is organized at the first, second, or third level, while in many of them reforms are being promoted on the structure of local government, to limit the number of primary local governments and to strengthen the role of the third level of local government (Allers & Geertsema, 2016; Blesse & Baskaran, 2016; Jengre & Kpinpuo, 2019). This phenomenon is observed mainly in the states that have joined the European Union more recently and are called upon to fill gaps in the local government where the former member states had established deep roots in the history of their governance.

European local government is therefore characterized by diversity which has to do not only with the different forms of LGOs from country to country but also due to the diversity in the organization of local government within the same country (Foundation for Economic and Industrial Research [IOBE], 2017). After all, over the years the needs of the citizens of each country have changed, thus pushing for additional changes in the organization of their local societies. In every EU country, the local government is affected by the socio-economic and historical conditions that prevail in the range of its territorial boundaries. Continuous developments strengthen the role of regional administration making the management of wider local and public affairs more efficient (Allers & Geertsema, 2016; Blesse & Baskaran, 2016). At the same time, however, the model of metropolitan areas is being created which brings together the rights and obligations of all levels of local government and therefore must have a specific type of governance.

Most member states of the European Union display in their Constitutions the principle of local autonomy and local government. However, the financial autonomy of local authorities is not presented with the same frequency in all these countries, even though based on Article 9 of the European Charter of Local Self-Government (Council of Europe, 1985) the basic principles regarding the financial resources of local authorities are defined. However, we could say that their income comes from three major categories: a) the provision of goods and services; b) taxation of local businesses and households; c) various grants from the Central Government and the EU.

On the other hand, in Greece, as in the rest of Europe, the criteria by which the country is divided into regional administrative units, always according to the decentralization system, are geo-economic, social, and transport (IOBE, 2017). State regional bodies established in these units acquire general competencies of a decisive type, and the state is limited to checking the legality of the decisions of these bodies, coordinating them, and providing general directions. The tasks and responsibilities aimed at the uniform exercise of government policy, as well as the defence of constitutional goods, are assigned to the decentralized administrations, such as environmental protection and urban planning, and are not allowed to be exercised by the Greek LGOs.

The institution of local government in Greece dates back to 1833 and is a fundamental institution for the quality of democracy. Based on Article 102 of the Constitution of Greece, local government organizations (LGOs or municipalities) are responsible for the administration of local affairs. Municipalities enjoy administrative and financial autonomy. The state takes care on the one hand to secure the resources of LGOs and on the other hand to provide the legal framework for their merger with LGOs to fulfill their mission. The first effect and precursor of the actions of the New Public Management in Greece was the Kapodistrias Program in 1997, which was the largest local government reform up to that time. The communities were merged into large municipalities to achieve optimization of public administration at the local government level. Within the framework of Kapodistrias, 5,755 municipalities and communities were merged into 910 municipalities and 124 communities (Pazarskis et al., 2019).

With the Kallikratis Program law (Law 3852/2010), special regulations are introduced for the Regions of the two major urban centers, the regions of the islands, as well as for the mountainous and island municipalities. The latter was expected to assume additional responsibilities accessible to their citizens, transferred from the region. Kallikratis incorporated regulations on many objects with about 16 relevant smaller laws. Thus, LGOs have now as their main responsibility the management of local affairs and the resolution of local problems. The distribution of these responsibilities between OTAs of the first and second degree is determined by law. According to the Constitution, LGOs can assume state responsibilities, but then the state is obliged to provide them with the necessary financial means (Constitution of Greece, Article 102, para. 5).

The Municipalities can therefore take over the control of the buildings since urban planning is part of a unified spatial planning. The construction and the logistical infrastructure of the school units are responsibilities that belong to the Municipalities, while matters concerning the personnel and teaching material of the education belong to the responsibility of the state. The range of responsibilities of the Municipalities in Greece regarding areas important to the local society, as well as urban development, is limited compared to many European ones. Such areas are environmental protection, land use planning, social policy, and urban planning.

Municipalities do not have the right to impose taxes since according to the Constitution (Constitution of Greece, Article 78, para. 4), this is the responsibility of the state. The subject of taxation, the determination of the tax rate, and general taxation with exemptions and exceptions are determined by a law passed by the Parliament. We, therefore, understand that the fiscal autonomy of the Municipalities in Greece is limited.

The responsibilities and services of the LGOs of the first degree are divided into main and transferred, while the responsibilities that are transferred from the state to the municipalities are committed to following the instructions of the State Services. The Greek Municipalities do not have regulatory autonomy except when special conditions apply, such as the regulation of matters of local interest, of a technical or detailed nature, in which case they can issue regulatory acts and only with special authorization (e.g., local market opening hours, traffic limits always of the Municipality, use of public utility Municipal facilities, etc.).

The range of responsibilities could be briefly focused on the following areas:

a) protection of the environment: renewable energy sources; environmental control; waste management; water supply — irrigation — arrangement of water; protected areas within the boundaries of the municipality;

b) education: construction and maintenance of school buildings; management of school facilities;

c) municipal infrastructures and facilities: construction, management, and maintenance of roads, parks, and areas of their territorial jurisdiction; municipal parking lots; building permits and supervision;

d) culture — sports: sports facilities (fields, gyms, swimming pools, etc.); cultural centers — museums;

e) social care: protection centers for the elderly (centers for leisure, municipal nursing homes) as well as for people with disabilities; social care programs (help at home, care); inspection and licensing of private care and welfare facilities (private nursing homes, etc.); children’s and nursery schools;

f) local development: control and licensing of local businesses of mainly health interest; itinerant trade;

g) health: carrying out checks to protect public health (abandoned — dilapidated buildings, stray animals, etc.); construction and maintenance of cemeteries; waste collection and management;

h) public order and safety: municipal police; volunteer fire department.

During the economic crisis, LGOs were significantly affected (Pantelidis et al., 2018a; Pazarskis et al., 2019). State grants to municipalities fell by 60% between 2009–2013. The municipal fees due to the crisis remained stagnant or even declined. The abolition of the municipal police, in addition to insufficient policing in everyday problems (illegal parking, occupation of common areas, etc.) in some cases also caused a significant loss in revenue due to fines.

Additionally, LGOs have important assets (public buildings, roads, parks, etc.). Streets, parks, and squares are offered for public use, while buildings such as kindergartens, schools, etc. are considered municipal public property, with a special legal status. Many Municipalities have significant private property (especially real estate, but also stocks, etc.). The corresponding actions (sale, purchase, rental, etc.) should be approved by the Municipal Council and subject to further substantive and procedural restrictions (competition, etc.). Of course, during the economic crisis in Greece (2010–2017), municipal real estate income (from rents) suffered a significant drop due to the decrease in economic activity in many sectors of the economy, and many properties remained vacant (Pantelidis et al., 2018a, 2018b).

For LGOs, the most important sources of revenue are waste management and cleaning duties, beer tax, property tax, and various fees for services, such as fees for cemeteries, fees for the use of slaughterhouses, etc. In several coastal areas, the tourist tax is an important source of revenue. Electricity companies collect two taxes (waste and cleaning) for local authorities when electricity bills are paid. The majority of taxes and fees are collected directly by the municipalities, but there are also some exceptions such as this one beer tax, which is collected by the state and returned to local authorities.

2.2. Literature review

Several studies performed on merger performance analysis and effective governance policies of LGOs after mergers worldwide (Tyrefors Hinnerich, 2009; Saarimaa & Tukiainen, 2015; Blesse & Baskaran, 2016; Zeedan, 2017; Hirota & Yunoue, 2017). According to Reingewertz (2012), a policy applied in the majority of developed countries is municipal reform mergers. In his related work, Reingewertz (2012), looking at the empirical interpretation of the financial results of mergers through the Difference-in-Differences method, used data on Israeli municipalities for the period 1999 to 2007 to analyze the applied 2003 reform for the annexation of Israel. The results showed a reduction of municipal expenses by 9% which, however, was not accompanied by a reduction in the quality of the services provided, as well as the introduction of practical economies of scale.

Bellas et al. (2010) investigated the fiscal results of the local government of the first degree and specifically the case of local authorities in the prefecture of Achaia for the period 2005–2007. They examined the budgets/reports of fifteen municipalities in the region of Achaia for the period from 2005 to 2007 and the following indicators were analyzed: a) the total of certified revenues to the total of budgeted revenues, b) the total of collected revenues to the total of budgeted revenues revenue and c) the total of committed appropriations to the total of budgeted expenses. The results showed that there is room for improvement both in increasing revenue collection and reducing expenses (which increased by 10–15% in more recent years).

Pallis and Pallis (2014) examined the development of real estate management by Municipalities as a financial tool. In their research, it is stated that municipal real estate is an asset that is difficult to value and is not a public good, but a municipal asset to be exploited. Many LGOs have attempted to capitalize on their real estate, to generate revenue for local authorities. Others have used public-private partnerships with direct private-sector financing to build municipal infrastructure in exchange for the right to use public land for commercial development. Pallis and Pallis (2014) consider that in Greece, the prevailing institutional structure does not allow local governments to play an important role due to limited powers and financial resources, while in their key findings, they concluded that the main financial instruments used in the municipalities of Greece and the system of financing from various sources.

The central theme of the research of Smaraidos et al. (2014) was the subsequent economic situation after the enactment of the Law of Kallikratis, seven local primary organizations in the Prefecture of Aitoloakarnania. For this purpose, a selection and analysis were carried out in these municipalities using eighteen financial ratios (including return on equity (ROE), return on assets (ROA), gross profit margin, etc.). The results showed a significant deterioration of the gross profit margin ratio as well as low values of the ROE and ROA indicators. In addition, except Municipality of Agrinio, a minimal dependence of the municipalities on loan funds was observed (less than 10%), while after checking Altman's Z-Score it appears that the possibility of bankruptcy does not represent a tangible threat for the municipalities. The foregoing assesses the management of local governments as inefficient with the possible emergence of liquidity problems in the future. The provision of grants by the state contributed to the formation of a relationship of dependence between the municipalities and their performance. Thus, the way the municipalities were administered was directly linked to the grants received from the state.

Psycharis et al. (2015) in their research on the subject of decentralization and fiscal autonomy of municipalities in Greece typically report that despite the widespread international trend towards decentralization, local Municipalities in Greece still rely on fiscally concentrated sources of revenue, thus achieving a limited degree of taxation or other forms of fiscal autonomy. Psycharis et al. (2015) attempting to explain the determinants of the fiscal autonomy of local government in Greece constructed a data set with analytical subcategories of income and expenditure for the first level of local government. Applying data analysis techniques, Psycharis et al. (2015) argued that socioeconomic and demographic criteria together with political factors differently affect the level of fiscal autonomy of local government in the country. In their evidence they also highlight the distinctive nature of Greece from a geographical point of view, citing significant differences in different geographical areas (such as islands or mountainous regions), while they end up proposing specific positions for internal fiscal decentralization in a centralized fiscal country such as Greece.

A framework to evaluate the financial performance of communities in Ireland was proposed by Turley et al. (2015). The framework comprises new financial performance measures that take into account the literature's recommendations for acceptable financial performance metrics for local government entities and provides an updated methodology. Five broad financial performance measures — liquidity, autonomy, operating performance, collection efficiency, and solvency — are evaluated using 14 indicators. This numerical and narrative study of important financial performance indicators is used by Turley et al. (2015) to Ireland's major local authorities throughout the most recent boom and recession. Their sample comprises only 5 city and 29 county councils. They distinguish between local authority financial performance that is generally good and weak by applying this framework for measuring financial performance using a benchmarking technique. To make it simpler for users to evaluate financial performance and to make a distinction between councils that are performing relatively well and those that are showing signs of financial trouble, Turley et al. (2015) advise the adoption of this framework as an addition to the annual financial statements of local authorities to identify councils in financial difficulty as early as possible.

The study by Pazarskis et al. (2016) evaluated the degree of success of the implementation of Law 3852/2010 in the Municipality of Serres, examining the financial statements of the public accounting system and the elements of the Human Resources of the Municipality and using twenty-one numerical indicators (financial ratios) as tools. The study concerned the time period of five years before and after the implementation of the Law 3852/2010. Pazarskis et al. (2016) concluded that eleven of the twenty-one financial ratios showed a statistically significant change in the period 2011–2015 and the majority of them improved.

Cohen et al. (2017) concluded that cost behavior in LGOs is not easily measurable in about benefits and benefits to citizens. Analyzing the revenues received by the Municipalities from various sources, such as fixed grants from the state budget, revenues from taxes or the provision of services/goods, etc. they concluded that a significant part of the state funding in Greece to the local self-government decreased dramatically due to the economic crisis, but the cost-cutting measures taken by the Greek Government in 2011 (in addition to a significant reduction in grants) are expected to have a positive effect on the efficiency of Municipalities.

In a relatively recent study by IOBE (2017), a total of 110 LGOs after the Kallicratis Program were examined using accrual accounting indicators to analyze the trends of their finances during the crisis. The degree to which characteristics such as geographical, size, and the distinction between municipalities that are capitals of prefectures and the rest of Greece, affect their financial performance was also examined. The conclusions reached were that the geographical (island and continental) and demographic (size) characteristics of the Municipalities of the Greek territory affect their financial performance and therefore a system that would evaluate their financial management should take these differences into account. According to IOBE (2017), this can be done if municipal indicators are compared with reference values (benchmarks) that differ according to their geographical and demographic characteristics. Finally, it is considered necessary in the continuous analysis and further evaluation of the financial statements of the Municipalities, the systematic analysis of the financial ratios and for this reason, the electronic monitoring infrastructures of the financial data, with the analysis of public accounting data on real-time, of the Municipalities by the Central Administration, must be strengthened.

Pallis and Pallis (2017) attempted to make a separation of LGOs in Greece into two categories based on the effectiveness of financial management and fiscal performance: into efficient and inefficient municipalities. Three variables were used to divide the sample into groups: the borrowing capacity of the municipality, the flexibility in operating costs, and the flexibility in investment costs. These three variables were considered by Pallis and Pallis (2017) to be the main dimensions of the effectiveness of financial and fiscal management and therefore their use represents the effectiveness or not of Greek municipalities. The study concludes that the municipalities were divided into two groups. The first group includes 110 municipalities (municipalities with ineffective financial management) and the second group includes 146 (municipalities with effective financial management).

Cohen and Hlepas (2017) argued that the financial crisis caused Greek municipalities to have to react financially, following the economic pressures on Greece for cuts and the simultaneous creation of increased social assistance needs. Cohen and Hlepas (2017) examined the case of four Greek Municipalities, considering the average financial performance of municipalities in Greece and the variability of this measure during the period 2002–2012. In all four municipalities, interviews were conducted with an elected politician and municipal officials, conducted based on a list of structured questions given to respondents before the interview session. The analysis revealed that the Municipalities proved to be particularly flexible and open toward social innovation and responded to the crisis through adaptation. Nevertheless, the shock caused by the crisis and the unprecedented reduction of municipal budgets caused the forced shift towards more prudent management and inevitable frugality in spending. From these data, it follows that Greek municipalities are still rather vulnerable in the future and, in particular, to the further deepening of the financial crisis that has existed in Greece in recent years.

Turley et al. (2020) reevaluate the financial situation and fiscal sustainability of local authorities in Ireland in light of the developments in the Irish economy since the economic crisis and, more especially, the reforms in the local government sector. They achieve this by using a local government financial performance framework that assesses various revenue streams' operational performance and collection rates in addition to liquidity and solvency. They report and assess the financial status and performance throughout the 2007–2017 period using financial data taken from local council income and expenditure accounts and balance sheets. Their findings show that from the beginning of 2010, local councils' financial performance has improved. Even if solely for the liquidity and operating performance criteria, there are still discrepancies among councils, particularly between major metropolitan local authorities and smaller rural local authorities. Even if the financial situation of the small rural councils is improving, there is still a severe issue that has to be discussed and is being closely watched by the central government. To make financial reports more accessible and transparent for citizens and taxpayers and, ultimately, to help improve performance and service delivery by local authorities, Turley et al. (2020) recommend including this framework in the local authority's Annual Financial Statement as well as in the Performance Indicator Report.

Although there is a sizable amount of research on local government efficacy, particularly in terms of financial success and citizen satisfaction, far less is known about it. Tran and Dollery (2021) utilize system-wide official yearly data on resident satisfaction in the Victorian state local government system in Australia to examine the connection between annual net operating outcomes and overall citizen satisfaction to fill this vacuum in the empirical literature. They also looked at the assumption in the 'near-to-zero balance' public accounting literature that locals prefer a small yearly balance in operating performance over big annual losses or surpluses to gain a deeper understanding of this connection. According to Tran and Dollery (2021), there is a considerable inverse relationship between overall pleasure and its constituent parts for Victorian state local government as a whole.

3. RESEARCH SAMPLE

3.1. Research sample frame

The research sample of Greek municipalities under consideration included the fifteen largest municipalities from an economic point of view. Specifically, these municipalities are selected based on the amount of total revenue they managed to collect based on their accounting data. These fifteen municipalities in our sample were chosen, as due to their size they can have a better organization of their financial services, have a significant number of employees for the proper support and operation of the economic, accounting, and auditing services, and thus limiting issues of insufficient employees as causes for a possible poor economic course of a municipality. The years examined are from the implementation of the beginning of the Kallikratis Program (2011) until seven years later (2017), which is, when the end of the financial crisis in Greece came. In that period, Greece entered a period of economic crisis due to public debt and at the end of this period managed to recover. Finally, the data was collected by the Hellenic Ministry of the Interior, while there is no specific database with public and open access to everyone.

3.2. Accounting measures — quantitative variables

Numerical indicators (accounting measures) are essential tools for making correct conclusions about the real financial situation of an organization or business. The analysis and results of the indicators help the organization's management, as well as those who control it, to determine the percentage of achievement of the goals that were initially set and the areas in which they may need to be redefined so that the organization becomes more efficient and sustainable about its capital structure. Their use by the LGOs requires attention, precisely because they are public entities, of a non-profit nature and their main purpose is to provide projects and services of a public benefit nature. On the other hand, however, the use of appropriate indicators enables them to achieve long-term goals of a developmental nature.

The more recent Accounting Reform of the Public Sector in Greece was initially institutionalized by Article 156 of Law 4270/2014, while then, with Presidential Decree 54/2018, the content and time of commencement of implementation of the General Government Accounting Framework (GGAF) were determined. Furthermore, the true and reasonable depiction of the total public property can only be achieved gradually and with the full implementation of the GGAF, as provided by the Presidential Decree 54/2018. The first implementation of the aforementioned Presidential Decree for municipalities was set to take place after 01.01.2023 and therefore more efficient elements of public accounting (beyond the sectoral accounting plan that was abolished) can be used for transformation on an accrual basis, according to the recent change in legislation for the monitoring of public accounting data (see, Presidential Decree 54/2018).

The accounting measures chosen to be examined as quantitative variables concern: the size of all collected revenues of a municipality; the amount that comes from regular government funding for operating expenses; the extraordinary funding for investment expenses that a municipality manages to claim and collect; and the level of expenses incurred in an annual period. Numerical indicators (accounting measures) of municipal income and expenditure have been widely used in various studies in the past (Reingewertz, 2012; Allers & Geertsema, 2016; Blesse & Baskaran, 2016; Goeminne & George, 2019). Finally, the quantitative variables used are shown in the table below.

Table 1. Quantitative variables — accounting measures

Variable	*Accounting measure*	*Accounting measure analysis*
AccM01	Total revenue collected	Total revenue collected includes: - the regular revenue collected; - the extraordinary revenue; - the revenue collected from previous financial years which is confirmed for the first time; - the collected income from collections from loans and receivables from previous financial years; - the collected revenues in favor of the public and third parties and refunds; - the cash balance of the previous year from regular and extraordinary revenues.
AccM02	Total received (regular) grants for operating expenses	The received revenue from grants for operating expenses which also constitute the total of operating grants.
AccM03	Total received (extraordinary) grants for investment costs	The received income of extraordinary grants to cover operating costs and the received income of extraordinary grants for investments and projects. The previously collected revenues constitute the totality of extraordinary grants.
AccM04	Expenditure level	It includes all municipal expenditures. It is calculated as the total operating expenditures and investments.

3.3. Research methodology

The main objective of the paper is the processing and comparison per period (first period: 2011–2012, second period: 2013–2015, third period: 2016–2017) or per year (from 2011 to 2017) of accounting measures that will correspond to the type of legal entity under consideration (LGOs). In addition, they should depict the successful governance of a public organization and determine the success of its competitiveness. That is why the financial data we have drawn for our analysis in this paper come from the public accounting data of the years 2011 to 2017, which are data of the era of the Kallikratis period and the progress of its implementation (Smaraidos et al., 2014; Pantelidis et al., 2018a). These data are by the summary tables of the registers of commitments for the years 2011–2017, as they are integrated into the official municipal financial data of the Hellenic Ministry of the Interior.

To check the above, several statistical tests are carried out, and more specifically, we employ Kruskal-Wallis tests (as no normal distribution is observed in our data, Kruskal-Wallis as a non-parametric test is selected that employs and ranks the median values from an examined sample), with comparisons of medians of accounting measures over different sub-samples in chronological order of the above researched periods (extracted from the main sample of this research) to find any difference that exists among different LGOs' performance after mergers (Pantelidis et al., 2018a).

4. RESULTS AND DISCUSSION

The next Table 2 depictures for the post-merger period of the fifteen examined LGOs the descriptive statistics, which includes data for: the first quartile — Q1 (that is the value under which 25% of data points are found when they are arranged in increasing order); the mean of our sample (the arithmetic mean is the sum of a sample of numbers divided by the count of numbers in the sample); the third quartile — Q3 (that is the value under which 75% of data points are found when arranged in increasing order); the maximum (that is the largest value in the data set of our sample); the interquartile range — IQR (that is a measure of statistical dispersion, which is the spread of the data and the IQR is defined as the difference between the 75th and 25th percentiles of the data); the standard deviation — stdev (that is a measure of how spread out the numbers are); the skewness (which is the degree of asymmetry observed in a probability distribution); the kurtosis (that is a measure of the 'tailedness' of the probability distribution of a real-valued random variable) of the sample LGOs.

Table 2. Descriptive statistics of examined variables in the post-merger period

Variable	*Minimum*	*Q1*	*Mean*	*Q3*	*Maximum*	*IQR*	*St.dev*	*Skewness*	*Kurtosis*
AccM01	45.592	69.349	125.917	121.63	530.883	52.28	106.658	2.416	5.089
AccM02	19.398	26.398	49.694	51.227	199.089	24.828	36.106	1.995	3.473
AccM03	0.729	3.773	9.777	12.312	57.162	8.538	8.754	2.211	7.449
AccM04	32.908	47.057	89.168	79.312	400.448	32.255	80.129	2.476	5.374

Note: The amounts are in millions of euros.

The data resulting from the calculations we made in the groups and subgroups of the financial statements we examined are listed in the tables below. Furthermore, the sample was investigated with the Kruskal-Wallis test statistical method. More specifically, the qualitative variable for our sample was several sub-periods of our total examined time period (2011–2017) that are presenting accumulated several phases of the Greek economic crisis (beginning, middle, and end of the crisis). Table 3 presents the results for examined variables in three post-merger periods (2011–2012; 2013–2015; 2016–2017); and Table 4 presents the results for examined variables in seven post-merger periods (the medians of them are compared correspondingly).

Table 3. Comparison results for examined variables in three post-merger periods

Variables	*Accounting measure*	*Median*			*p-value*
		1st period (2011–2012)	*2nd period (2013–2015)*	*3rd period (2016–2017)*	
AccM01	Total revenue collected	83.642	79.444	81.495	0.793
AccM02	Total received (regular) grants for operating expenses	39.499	36.841	33.372	0.187
AccM03	Total received (extraordinary) grants for investment costs	8.07	9.058	4.441	0.001***
AccM04	Expenditure level	66.480	62.394	56.384	0.116

*Notes: The amounts are in millions of euros. ***, **, * indicate that the change of the median is significantly different from zero at a significance level of 0.01, 0.05, and 0.10, respectively.*

Table 4. Comparison results for examined variables in seven post-merger periods

Variables	*Median*							*p-value*
	2011	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	
AccM01	83.494	83.789	79.444	75.742	80.083	80.128	82.861	0.990
AccM02	39.769	38.853	36.841	37.001	36.794	36.935	31.815	0.466
AccM03	6.220	9.722	12.071	8.787	8.731	5.074	3.897	0.007***
AccM04	63.351	71.177	62.898	58.648	60.534	55.659	58.126	0.585

*Notes: The amounts are in millions of euros. ***, **, * indicate that the change of the median is significantly different from zero at a significance level of 0.01, 0.05, and 0.10, respectively.*

As can be seen from the tables above, during a period of seven years after the implementation of Law 3258/2010 of Kallikratis reform in the largest municipalities of Greece, three (*AccM01*; *AccM02*; *AccM04*) of the four examined accounting measures *AccM01-04* (total revenue collected; total received regular grants for operating expenses; expenditure level) improved (but not with a statistically significant change), which means that the municipalities they managed to respond satisfactorily during the crisis and after the mergers to the new tasks they took on. The exception was accounting size *AccM03* (total received extraordinary grants for investment costs), where we observe that it worsened statistically significantly and there should be concerted efforts in each municipality from the administration's side with a redesign of organizational resources, to achieve additional funding from European financial resources as well.

Similar results to the above have been found in previous studies that supported a partially better performance of the municipalities after their mergers and the implementation of the Kallikratis Program (Smaraidos et al., 2014; Pazarskis et al., 2016). Furthermore, similar results which also supported a different performance per LGO were provided by other previous studies (Pantelidis et al., 2018a). Last, Cohen and Hlepas (2017) argued that Greek municipalities are still rather vulnerable in the future and, in particular, to the further deepening of the financial crisis that has existed in Greece in recent years.

5. CONCLUSION

In Europe, in recent years, many reforms have been carried out in the wider area of Local Government. Most of them concern mergers of Municipalities and processes of transfer of responsibilities to them. In this context, Law 3852/2010 was initiated in Greece, known as the Kallikratis Program, which was implemented on 01/01/2011. This program was a tremendously ambitious undertaking, promoting the restructuring of both levels of the country's Local Government. Its main goal was the more rational management of the finances of the LGOs. first and second grade and their push towards a more creative development perspective. Unfortunately, its implementation coincided with the economic crisis in the country, with the result that there is no allocation of resources to the Municipalities commensurate with the increased responsibilities assigned to them.

This paper, therefore deals with the effect of the Kallikratis Program on the finances of the fifteen largest municipalities in Greece, using four accounting variables, seven years after the implementation of the law and in the individual time periods of these years, thus trying to evaluate its application through the financial statements of the Municipality, based on the public accounting system. By conducting research, it was found four accounting figures were studied three of them presented a better performance — even not with a statistically significant change (total revenue collected; total received regular grants for operating expenses; expenditure level), while there was a decrease in one accounting variable with statistically significant change (total received extraordinary grants for investment costs), precisely due to the implementation of the Kallikratis Program, which combined with the onset of the financial crisis led to the reduction of extra funds for investments in LGOs.

The present research constitutes only a part of the overall situation of the LGOs of Greece after the crisis through the evaluation of their financial statements, as there were limitations regarding the relatively small sample (although it represented a large part of the overall financial data of the municipalities). There is still a specific and limited period in the seven years of the crisis and it concerns only Greek municipalities that apply public accounting system.

At a later time, an analysis involving a larger sample, with more LGOs, could be done. In addition, it could also concern municipalities from another country, with a longer period of time and broader methodological indicators.

REFERENCES

1. Allers, M. A., & Geertsema, J. B. (2016). The effects of local government amalgamation on public spending, taxation, and service levels: Evidence from 15 years of municipal consolidation. *Journal of Regional Science, 56*(4), 659–682. http://doi.org/10.1111/jors.12268
2. Bellas, A., Kontogeorga, G., Thanasas, G. L., Papadatos, K., & Goulas, D. G. (2010, August 25–27). *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* [Paper presentation]. 3rd International Conference on Accounting and Finance, Skiathos Isl., Greece. http://ssrn.com/abstract=1684261
3. Berrioategortua, J., Olasagasti, O. d. O., & Florencio, B. P. (2018). Does company performance improve after M&A? A literature review. In S. Finkelstein, & C. Cooper (Eds.), *Advances in Mergers and Acquisitions, 17,* (pp. 31–51). Emerald Publishing. http://doi.org/10.1108/S1479-361X20180000017002
4. Blesse, S., & Baskaran, T. (2016). Do municipal mergers reduce costs? Evidence from a German federal state. *Regional Science and Urban Economics, 59*(1), 54–74. http://doi.org/10.1016/j.regsciurbeco.2016.04.003
5. Cartwright, S., & Schoenberg, R. (2006). Thirty years of mergers and acquisitions research: Recent advances and future opportunities [Special issue]. *British Journal of Management, 17*, 1–5. http://doi.org/10.1111/j.1467-8551.2006.00475.x
6. Cohen, S., Karatzimas, S., & Naoum, V.-C. (2017). The sticky cost phenomenon at the local government level: Empirical evidence from Greece. *Journal of Applied Accounting Research, 18*(4), 445–463. http://doi.org/10.1108/JAAR-03-2015-0019
7. Cohen, S., & Hlepas, N. (2017). Financial resilience of Greek local governments. In I. Steccolini, M. D. S. Jones, & I. Saliterer (Eds.), *Governmental financial resilience: International perspectives on how local governments face austerity (Public policy and governance), 27*, (pp. 135–152). Emerald Publishing. http://doi.org/10.1108/S2053-769720170000027008
8. Constitution of Greece. *Hellenic Parliament.* https://www.hellenicparliament.gr/UserFiles/f3c70a23-7696-49db-9148-f24dce6a27c8/2019_SYDAGMA_EN_2022_WEB.pdf
9. Council of Europe. (1985). *European Charter of Local Self-Government*, [Online]. Available: https://rm.coe.int/european-charter-for-local-self-government-english-version-pdf-a6-59-p/16807198a3

10. Dargenidou, C., Gregory, A., & Hua, S. (2016). How far does financial reporting allow us to judge whether M&A activity is successful? *Accounting and Business Research, 46*(5), 467–499. http://doi.org/10.1080/00014788.2016.1182702
11. Foundation for Economic and Industrial Research (IOBE). (2017). *Analysis of the financial data of the Kallikratic municipalities and their progress towards accrual accounting.* http://iobe.gr/docs/research/RES_04_27062017_REP_GR.pdf
12. Galariotis, E., Guyot, A., Doumpos, M., & Zopounidis, C. (2016). A novel multi-attribute benchmarking approach for assessing the financial performance of local governments: Empirical evidence from France. *European Journal of Operational Research, 248*(1), 301–317. http://doi.org/10.1016/j.ejor.2015.06.042
13. Goeminne, S., & George, B. (2019). New development: Determinants of financial performance in public organizations. *Public Money & Management, 39*(1), 70–73. http://doi.org/10.1080/09540962.2018.1476309
14. Golubov, A., Petmezas, D., & Travlos, N. G. (2013). Empirical mergers and acquisitions research: A review of methods, evidence and managerial implications. In A. R. Bell, C. Brooks, & M. Prokopczuk (Eds.), *Handbook of research methods and applications in empirical finance* (pp. 287–313). http://doi.org/10.4337/9780857936097.00021
15. Grigorieva, S. (2020). How M&A deals influence corporate performance in developed and emerging capital markets: A review of empirical results in the literature. In I. Ivashkovskaya, S. Grigorieva, & E. Nivorozhkin (Eds.), *Strategic deals in emerging capital markets* (pp. 33–61). Springer. http://doi.org/10.1007/978-3-030-23850-6_2
16. Harman, G., & Harman, K. (2008). Strategic mergers of strong institutions to enhance competitive advantage. *Higher Education Policy*, *21*(1), 99–121. http://doi.org/10.1057/palgrave.hep.8300172
17. Hirota, H., & Yunoue, H. (2017). Evaluation of the fiscal effect on municipal mergers: Quasi-experimental evidence from Japanese municipal data. *Regional Science and Urban Economics, 66*(1), 132–149. http://doi.org/10.1016/j.regsciurbeco.2017.05.010
18. Hood, C. (1995). The "new public management" in the 1980s: Variations on a theme. *Accounting, Organizations and Society, 20*(2–3), 93–109. http://doi.org/10.1016/0361-3682(93)E0001-W
19. Jansen, E. P. (2008). New public management: Perspectives on performance and the use of performance information. *Financial Accountability and Management, 24*(2), 169–191. http://doi.org/10.1111/j.1468-0408.2008.00447.x
20. Jengre, E., & Kpinpuo, S. D. (2019). Participation of youth in local level governance: Developing country case study. *Corporate Governance and Organizational Behavior Review*, *3*(2), 8–18. http://doi.org/10.22495/cgobr_v3_i2_p1
21. Kumar, M. S. (1984). *Growth, acquisition and investment: An analysis of the growth of industrial firms and their overseas activities.* Cambridge University Press.
22. Law 3852/2010. New architecture of local government and decentralized administration — Kallikratis Programme. *Government Gazette*, 87/A'/07-06-2010. https://ec.europa.eu/migrant-integration/library-document/law-38522010-new-architecture-local-government-and-decentralized-administration_en
23. Law 4270/2014. Principles of fiscal management and supervision (transposing Directive 2011/85/EU) public accounting system and other provisions. *Government Gazette*, 143/A'/28-06-2014. https://www.et.gr/api/DownloadFeksApi/?fek_pdf=20140100143
24. Mueller, D. C. (1980). *The determinants and effects of merger: An international comparison.* Gunn & Hain.
25. Pallis, C., & Pallis, P. (2014). The development of municipalities property management as a financial tool: An empirical investigation. *Journal of Property Investment and Finance*, *32*(1), 78–93. http://doi.org/10.1108/JPIF-09-2013-0054
26. Pallis, C., & Pallis, P. (2017). Separating municipalities regarding their financial performance — Evidence from Greece. *Economics World*, *5*(2), 164–173. http://doi.org/10.17265/2328-7144/2017.02.009
27. Pantelidis, P., Pazarskis, M., Karakitsiou, A., & Dolka, V. (2018a). Modeling an analytic hierarchy process (AHP) assessment system for municipalities in Greece with public accounting of austerity. *Journal of Accounting and Taxation*, *10*(5), 48–60. http://doi.org/10.5897/JAT2018.0300
28. Pantelidis, P., Pazarskis, M., Drogalas, G., & Zezou, S. (2018b). Managerial decisions and accounting performance following mergers in Greece. *Investment Management and Financial Innovations, 15*(1), 263–276. http://doi.org/10.21511/imfi.15(1).2018.22
29. Pazarskis, M., Giovanis, N., Pantelidis, P., & Metskas, V. (2016, June 22–24). Evaluation of the "Kallicratis" program in the municipality of Serres: Analysis of financial data and human resources. *Conference Proceedings* (pp. 438–453). 11th MIBES Conference, Heraklion, Greece. http://mibes.teilar.gr/proceedings/2016/Pazarskis-Giovanis-Pantelidis-Metskas.pdf
30. Pazarskis, M., Goumas, S., Koutoupis, A., & Konstantinidis, K. (2019). Do municipal mergers work? Evidence from municipalities in Greece. *Journal of Governance and Regulation*, 8(2), 61–67. http://doi.org/10.22495/jgr_v8_i2_p8
31. Presidential Decree 54/2018. *Government Gazette*, 103/A'/13-06-2018. https://www.et.gr/api/DownloadFeksApi/?fek_pdf=20180100103
32. Psycharis, Y., Zoi, M., & Iliopoulou, S. (2015). Decentralization and local government fiscal autonomy: Evidence from the Greek municipalities. *Environment and Planning C: Politics and Space*, *34*(2), 262–280. http://doi.org/10.1177/0263774X15614153
33. Reingewertz, Y. (2012). Do municipal amalgamations work? Evidence from municipalities in Israel. *Journal of Urban Economics*, *72*(2–3), 240–251. http://doi.org/10.1016/j.jue.2012.06.001
34. Saarimaa, T., & Tukiainen, J. (2015). Common pool problems in voluntary municipal mergers. *European Journal of Political Economy*, *38*(1), 140–152. http://doi.org/10.1016/j.ejpoleco.2015.02.006
35. Smaraidos, V. S., Thanasas, G. L., & Kontogeorga, G. N. (2014, September 4–5). *The impact of Kallikratis project on accrual basis accounting of the first-degree local authorities: A financial analysis of the municipalities of prefecture of Aitoloakarnanias* [Paper presentation]. 5th International Conference of Accounting and Finance, Syros Island, Greece. http://ssrn.com/abstract=2493280
36. Tran, C.-D. T. T., & Dollery, B. (2021). All in the mind: Citizen satisfaction and financial performance in the Victorian local government system. *Australian Accounting Review*, *31*(96), 51–64. http://doi.org/10.1111/auar.12317

37. Turley, G., Robbins, G., & McNena, S. (2015). A framework to measure the financial performance of local governments. *Local Government Studies*, *41*(3), 401–420. http://doi.org/10.1080/03003930.2014.991865
38. Turley, G., Di Medio, R., & McNena, S. (2020). A reassessment of local government's financial position and performance: The case of Ireland. *Administration*, *68*(2), 1–35. http://doi.org/10.2478/admin-2020-0009
39. Tyrefors Hinnerich, B. (2009). Do merging local governments free ride on their counterparts when facing boundary reform? *Journal of Public Economics, 93*(5–6), 721–728. http://doi.org/10.1016/j.jpubeco.2009.01.003
40. Zeedan, R. (2017). Bigger but not always better: Size and democracy in Israeli amalgamated local governments. *Journal of Urban Affairs*, *39*(5), 711–728. http://doi.org/10.1080/07352166.2016.1262701