

The Impact of Effective Leadership on Public Sector's Financial Instruments: Empirical Evidence from Greece

Viktoria Gentsoudi,  <https://orcid.org/0000-0002-1090-3700>

PhD student, Faculty of Economics, South-West University "Neofit Rilski" Blagoevgrad, Bulgaria

Corresponding author: Viktoria Gentsoudi, giotisveta@gmail.com

Type of manuscript: research paper

Abstract: *Leadership management refers to leading and managing a team or an organization. It involves developing a vision, setting goals, and providing guidance and support to employees to achieve those goals. Effective leadership management is crucial for organizations to achieve their objectives, as it helps build a positive work environment, encourage innovation, and promote teamwork. Leadership plays a vital role in enhancing the performance of private holding organizations and driving quantitative and qualitative success in a nation's public sector comprised of a range of services offered to the public. This paper aims to investigate the financial impact of leadership management on the Greek public sector using empirical data and analysis extracted from the dissertation under the title "Leadership and organizational change in the financial decision making in Greek public sector in a time of financial and humanitarian crises", also written by the paper's author. The study employs fixed OLS regression and UQR models to examine the effects of leadership on the systematic, idiosyncratic, and total risk as well as the value of the public sector, i.e., governance and corruption levels, during the aftermath of the financial crisis that hit the country between the years 2015 and 2019. Additionally, it explores the potential benefits of team leadership on public services' quality. The results indicate that leadership demonstrates a statistically significant impact on all public sector risk components. Furthermore, increasing team leadership across public sector divisions may enhance the public sector's overall value. While verifying the positive impact of leadership on value, and despite the confirmation of a risk-reducing effect of leadership only regarding idiosyncratic risk, this impact appears not only to be of low magnitude but also to account for minor statistical significance.*

Keywords: leadership management, finance, systematic risk, unsystematic risk, OLS regression, UQR model, public sector, Greece.

JEL Classification: G32, F65, O16.

Received: 10 May 2023

Accepted: 11 June 2023

Published: 30 June 2023

Funding: There is no funding for this research.

Publisher: Academic Research and Publishing UG (i.G.) (Germany)

Founder: Sumy State University and Academic Research and Publishing UG (i.G.) (Germany)

Cite as: Gentsoudi, V. (2023). The Impact of Effective Leadership on Public Sector's Financial Instruments: Empirical Evidence from Greece. *Business Ethics and Leadership*, 7(2), 47-54. [http://doi.org/10.21272/bel.7\(2\).47-54.2023](http://doi.org/10.21272/bel.7(2).47-54.2023).



Copyright: © 2023 by the author. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

The Impact of Effective Leadership on Public Sector's Financial Instruments: Empirical Evidence from Greece

Introduction

Leadership is important for organizations since it plays a significant role in driving success and achieving organizational goals. Effective leadership can improve employee motivation, foster a positive work culture, and enhance productivity. People's motivation capacity depends on their specific needs and ability to resist a socio-psychic or internal-external tension (Hakobyan, Khachatryan, 2022: 99). Leaders provide direction, set expectations, and provide feedback and support to their employees. They help to develop and implement strategies, make decisions, and guide their team towards success. According to Hakobyan (2022), many emotional deviations can occur after reaching the top best result because of motivational reinforcement. The impact of leadership on financial decision-making in public sectors across the globe is a topic of great interest to researchers and policymakers. The first finding regarding this impact is that effective leadership can lead to better financial decision-making in public sectors. Research has shown that good leadership can improve organizational performance, promote innovation, and foster a positive work environment, all of which can positively impact financial decision making.

Another finding is that leadership can significantly impact risk management in public sectors. Effective leadership can help to identify potential risks and implement strategies to manage them. By providing clear direction and guidance, leaders can help to minimize risk and ensure the financial stability of public sectors. Furthermore, research has shown that team leadership can lead to higher-quality services offered to the public. When leaders work together as a team, they can share ideas, resources, and expertise to deliver better outcomes for the public. In the Greek public sector context, leadership can be defined as managing, influencing, empowering and eventually inspiring its state employees initiated by Greek government officials to achieve short- and long-term financial goals for the whole society.

This paper investigates if Greece follows international leadership and financial decision-making norms in public sector operations. In other words, this paper attempts to answer whether effective leadership has a significant positive impact on the public sector's value on the one hand and a significant negative effect on the public sector's total risk on the other. The current research paper is organized: a literature review, the research methodology applied, and how sample data was collected to construct the final empirical design. The core section discusses the empirical results, distinguishing between public risk and public value relationship. The last part offers valuable conclusions that can be used either by academics or policymakers associated with the Hellenic public sector.

Literature Review

Leadership management has been found to be a crucial determinant of organizational performance in the private and public sectors. Several studies have reported that effective leadership management improves employee motivation, organizational culture, and overall performance (Avolio & Gardner, 2005; Judge & Piccolo, 2004). Similarly, in the public sector, leadership management is linked to improved service quality, better fiscal management, and increased accountability (Bass & Avolio, 2004; Kim & Lee, 2015; Meier & O'Toole, 2006). Authors such as Kouzes and Posner (2007) highlight that effective leaders play a crucial role in identifying and assessing risks within the public sector. They emphasize the importance of leadership in creating a risk-aware culture and establishing frameworks for comprehensive risk assessments.

Cameron and Quinn (2011) argue that leadership is critical in building organizational resilience in the face of risks. Leaders who promote a culture of adaptability and learning can enhance an organization's ability to withstand and recover from adverse events, as suggested by studies on organizational resilience by Lengnick-Hall et al. (2011). In terms of leadership's influence on strategic vision and goal setting, Collins and Porras (1996) emphasize that influential leaders in the public sector establish a compelling vision and set ambitious yet achievable goals. This strategic direction enables value creation by aligning efforts toward the organization's mission and inspiring employees to contribute to its success.

Finally, studies by Denhardt and Denhardt (2014) suggest that leadership practices significantly impact performance management systems in the public sector. Influential leaders establish performance metrics, provide regular feedback, and promote a culture of continuous improvement, thus enhancing value-creation

efforts. Despite the lack of existing literature in Greece, several studies associated with all three types of leadership and the Greek public sector suggest that leadership management significantly impacts the performance of public sector organizations. Several studies have examined the relationship between leadership and various aspects of public sector performance in Greece.

One study found that transformational leadership was positively related to job satisfaction and organizational commitment among employees in the Greek public sector (Samantha & Lamprakis, 2018), while another sets the determinants of an effective leadership within the financial scope of Greece's public sector (Tzavella, 2022) asking proper questions and signaling that Greece still has a long way ahead to achieve sustainable management effectiveness:

- Does public sector leadership exist in its right, or is it merely private leadership applied to the public domain?
- What is the impact of public sector leadership?
- What is the best leadership style to use in a time of crisis?
- Are there leadership development programs which focus on the difference between administrative leaders in the public sector and their counterparts in the business world?

The reviewed international and Greek literature underscores the influential role of leadership in managing risks and creating value within the public sector. Effective leadership practices contribute to risk identification, assessment, mitigation, and organizational resilience. Furthermore, effective leadership can improve employee motivation, job satisfaction, and organizational commitment, leading to better performance outcomes. Hence, it is imperative for Greek public sector organizations, specifically, to understand and leverage the impact of leadership to optimize risk management strategies and facilitate optimal value outcomes.

Research Methodology

Our data collection encompasses a wide range of macro- and microeconomic indicators such as the public sector's total risk (systematic & idiosyncratic), value, and leadership scores on the one hand and the country's GDP, national debt and government expenditures on the other. Those variables are quantified in that way to be utilized in the setup of a fixed-effects process, literally constructing two predictive models by implementing; a) the Ordinary Least Squares (OLS) and b) the Unconditional Quantile Regression (UQR) methods. OLS is a commonly used method in econometrics for estimating the parameters of a linear regression model. The main idea behind OLS is to find the "best fit" line that minimizes the sum of the squared differences between the actual values of the dependent variable and the predicted values the model gives. Mathematically, OLS estimates the parameters of a linear regression model of the form:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon \quad (1)$$

where Y is the dependent variable, X₁, X₂, ..., X_n are the independent variables, β₀, β₁, β₂, ..., β_n are the coefficients (or parameters) to be estimated, and ε is the error term.

Therefore, we parse the influence of leadership on all risk components using the following fixed effects data with standard errors and control variables being lagged by one period:

$$\text{Risk}_{t+1} = \alpha + \beta * \text{Lead}_t + \lambda * (\text{Lead}_t \times \text{Debt}_t) + \gamma_1 \text{Debt}_t + \gamma_2 \text{GDP}_t + \gamma_3 \text{EXP}_t + \eta_t + \xi_t + \varepsilon_{t+1} \quad (2)$$

where α = 0.01, 0.05 and 0.10.

To investigate the potential relationship between Leadership and the Public sector's risk or value in the context of the data distribution, we use the notion of quantiles in our regression model. Quantiles determine how many data values are above or below a specific limit (median). The paper replicates the unconditional quantile regression model (UQR) developed by Firpo et al. in 2009. The model demonstrates how an unconditional quantile of the public sector's risk (and value) distribution is impacted by a marginal change in the distribution of the independent variable, in our case, Leadership, while applying the effects of other regressors. For our analysis, the respective Leadership score is a percentile set of scores scaled to the value interval 0 to 1.

Mathematically, the unconditional quantile regression model can be written as:

$$Q_y(p | X) = X' \beta(p) \quad (3)$$

where $Q_y(p | X)$ is the p th quantile of the distribution of the dependent variable y conditional on the values of the independent variables X , and $\beta(p)$ is a vector of coefficients that vary with the quantile p .

Having examined the impact of leadership on both the public sector's risk and value, we also test the independent variable's overall predictive power and confirm our results' robustness. We do so by using two notions derived from the credit scoring theory: a) The Weight of evidence (WOE) and b) the Information Value (IV). Both indicators are implemented on binary classification rather than on multiple variables problems. Since our model is based on a multivariable setup, a further modification of the risk variable was mandatory according to the following assumption:

We assign all observations below the median to a positive (+) label while to all observations above it a negative label (-). Our assumption, which is evolved from macroeconomics, states that the higher the organization's total risk is, the greater the probability of defaulting due to extensive systematic and unsystematic credit risk exposure. Having set our binary transformation for all variables of interest, namely the duo leadership & risk and leadership & public sector value we calculate the WOE value based on the following equation:

$$\mathbf{WOE} = | \ln (\text{distribution } (+)/\text{distribution } (-)) | \quad (4)$$

We also compute the IV value based on the following definition:

$$\mathbf{IV} = \Sigma (\% \text{ distribution } (+) - \% \text{ distribution } (-)) * \mathbf{WOE} \quad (5)$$

According to Saddiqi (2006), the values of IV scoring can be explained as follows:

If the IV value is:

- (I) < 0.02 , the regressor is not useful for modeling;
- (II) $0.02 - 0.1$, the regressor has only a weak impact on dependent variable;
- (III) $0.1 - 0.3$, the regressor has a medium strength impact;
- (IV) > 0.3 , the regressor has a very strong impact.

Empirical Results

To quantify and hence measure leadership management presence within the Greek public sector, we utilize data from studies, surveys and questionnaires conducted in the past, all directly related to different public sector divisions. The main idea is to set up a meaningful score system comprising and capturing all main attributes a leader should possess teamwork, career growth, upskilling, job recognition and satisfaction and lastly, relationship with other colleagues.

A public sector's risk is directly associated with the internal (idiosyncratic risk) and external (systematic risk) financial environment of the country's economy. Greece's finances have been through difficult times in the recent past; A debt crisis outbreak in 2010 also affected other Eurozone members and the banking crisis with the so-called capital control measures imposed by the Greek government in 2015. Furthermore, the ongoing globalization of the markets, regardless of the nature of the security traded, has also contributed to the already sensitive to "turbulences" systematic risk of the country, i.e., the risk of defaulting in the same way that happened between 2010-2105. By default, the idiosyncratic (or unsystematic) risk is related to financial resources of fiscal nature that policymakers can control and hence be diversified and somehow eventually mitigated, such as public investment returns and tax flows. According to traditional portfolio theory, together, systematic and idiosyncratic risk recombine the so-called total risk of a financial entity, in our case, a country like Greece.

At first glance, someone would immediately deduce that no matter how good or effective leadership management within the public sector is, it would not impact the systematic risk (SR) related to the country's external financial environment. Our findings verify this assumption; leadership and systematic risk are negatively correlated; however, we find no evidence that this impact is statistically important, regardless of the control variable incorporated in our model (Table 1).

Table 1. Fixed Effects for SR and Leadership with GDP as Control Variable

Systematic Risk/Lead & GDP						
Regression Stats						
Multiple R					0.86	
R Square					0.74	
Adjusted R Square					0.73	
Standard Error					1.34	
Observations					60.00	
Variation Analysis						
	<i>βαθμοι ελευθεριας</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	2.00	285.14	142.57	79.73	00.00	
Residuals	57.00	101.93	1.79			
Total	59.00	387.07				
Coefficients						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t</i>	<i>P-Value</i>		
Intercepts	26.41	1.70	15.56	0.00		
LEAD	-0.31	1.44	-0.21	0.83		
GDP	-117.14	9.48	-12.26	0.00		

Source: Author’s data analysis

Further, our UQR results illustrate the effect magnitude of leadership management across all systematic risk quantiles; It appears that the greater the systematic risk, i.e., the spread difference between German and Greek bonds increases, the greater the importance of effective leadership in the Greek public sector (Figure 1). The same appears not true when running the same process for control variables, for instance, government expenditures. We detect no significant effect of how Greek policymakers manage national investment funds and systematic risk across all quantiles. This result is of considerable importance; Greece needs to incorporate a more effective investment plan through a strong leadership presence while planning and executing national investment programs for the benefit of the central government and hence in favor of the Greek population.



Figure 1. Leadership’s Importance Increases the Higher the SR

Source: Author’s data analysis

In terms of idiosyncratic risk (IR), our bivariate analysis signals a stark negative correlation between leadership and Greece’s unsystematic risk. The greater the leadership presence, the higher the investment returns and taxation cash flows, minimizing idiosyncratic risk and maintaining internal financial stability. The OLS analysis verifies this finding (Table 2), which demonstrates a great statistically significant importance (at 0.05), even when we add investment expenses and national debt as regressors; An increasingly effective leadership in the public sector of Greece not only benefits the internal financial management but also could potentially decrease external debt levels on the one side and increase future investments profitability on the other. In line with systematic risk, leadership seems to have a great magnitude impact while dealing with high idiosyncratic risk probabilities, i.e., effective leadership becomes mandatory in cases of economic distress, especially when fiscal results start to deteriorate.

Table 2. Fixed Effects for IR and Leadership with Debt as Control Variable

Idiosyncratic Risk/Lead & GDP						
Regression Stats						
Multiple R					0.36	
R Square					0.13	
Adjusted R Square					0.10	
Standard Error					6.56	
Observations					60.00	
Variation Analysis						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	2.00	359.00	179.50	4.17	0.02	
Residuals	57.00	2453.08	43.04			
Total	59.00	2812.08				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t</i>	<i>P-Value</i>		
Intercepts	35.04	15.40	2.28	0.03		
LEAD	-16.46	7.08	-2.33	0.02		
GDP	-60.43	50.28	-1.20	0.23		

Source: Author's data analysis

Adding up all the above findings, it becomes clear to the reader that effective leadership management across all of Greece's risk components can have a significant impact. In all regression cases, leadership and total risk move in the opposite direction. An increased leadership management presence results in a considerable decrease in the public sector's risk. Based on our findings, leadership has a more significant impact when total risk reaches higher quantile levels, i.e., decisive leadership's actions value more the higher the compound probability of defaulting in times of economic distress. Running the same test by incorporating macro control variables, we verify the strong relationship between GDP, external debt and total risk, especially in financial distress. In contrast, the same appears not to be true when we regress total risk and government expenditures, which we also observed while examining the effect of these control variables on systematic risk.

To analyze the relationship between leadership and financial decision-making of the Greek public sector, we approximate Greece's public sector value utilizing two indicators taken out from the government effectiveness index (World Bank) for the timeframe we are interested in, namely governance effectiveness and corruption levels. When functioning correctly, both can contribute to a higher quality of services offered to the public. For instance, the Federal Republic of Germany is ranked higher than the Hellenic Republic in both cases. According to the latest edition of the Worldwide Governance Indicators (WGI) published by the World Bank, Greece was ranked 69th out of 209 countries in terms of government effectiveness as of 2021. As for Europe, Greece was ranked 27th out of 44 European countries in the index.

Our empirical study confirms existing literature; An increased leadership management presence has a positive and statistically significant effect on public value (Figure 2). This result is also solid when combined with all macro indicators used in the dissertation. Furthermore, we verify the strong leadership management impact when public value scores reach the highest value domains; Public service quality is tightly bonded with effective leadership concepts. Last but not least, we observe sharp effect variations regarding how far Greece's public sector is influenced by macroeconomic indicators such as GDP, national Debt and government expenditures, leaving no room for safe and solid statistical results.



Figure 2. Leadership’s Impact Becomes Greater as Public Value Increases

Source: Author’s data analysis

Finally, we test the robustness of our results by implementing equations (4) and (5), respectively, for all binary relationships defined in the research methodology section. As seen in Table 3, the total IV value for testing leadership on total risk is 0.63, indicating a strong relationship and, thus, a high impact power. Therefore, the dataset selection, the definition of all variables of interest and, therefore, the buildup process of our regression model is characterized by robustness and liability regarding the final empirical results.

Table 3. WOE and IV Values for Binary Classifications Lead-Risk/Value

<i>Robustness test lead/risk</i>								
Scores	bad	good	Total	R Rate	Bad %	Good %	WOE	IV
low	5	1	6	17%	19%	3%	-1.81	0.28
medium	16	14	30	47%	59%	42%	-0.33	0.06
high	6	18	24	75%	22%	55%	0.90	0.29
Total	27	33	60	55%	100%	100%		0.63
<i>Robustness test lead/value</i>								
low	1	0	1	0%	33%	0%	-	-
medium	1	1	2	50%	33%	50%	0.42	0.07
high	1	1	2	50%	33%	50%	0.42	0.07
Total	3	2	5					0.14

Source: Author’s data analysis

Following the same logic, we also evaluate the prediction power of leadership on the public sector’s value. Again, in Table 3 we can observe the balanced WOE values of the binary scheme as well as the medium strength impact (0.14) of the regressor (yearly leadership scores) on the dependent variable (yearly public value scores).

Conclusions

Effective leadership is not always easy to be implemented. The human factor plays a crucial role in that. Every organization, every entity, whether it is an enterprise or a state, at different time periods faces unprecedented challenges that must be overcome. Modern leaders have to possess multiple skills to succeed, literally, one thing for their teams: Inspiration. To inspire means it is worthy of following the leader. This study attempted to link the missing parts between effective leadership management and a state’s effectiveness in dealing with its internal and external challenges in financial decision-making.

Our empirical findings verify micro- and macroeconomic theory regarding leadership management and public-sector interaction and contribute valuable conclusions to the existing literature. Since our study focuses on Greece’s finances, our findings can be utilized by the policymakers of the country to amplify financial decision-making across all public sector divisions and enhance service quality offered to the public, maintaining at the same time sustainable fiscal results.

This study also offers another advantage: The selected time interval captures the aftermath of the Greek economic crisis that started in 2010. The carefully chosen data provided a “window” between the outbreak and the recovery process. Furthermore, our statistical results are validated by numerous score testing systems throughout the entire econometric procedure. Beyond that, the UQR methodology is something that has only been developed very recently. This study contributes valuable conclusions using this modern technique since it can be used as a reference for future empirical processes by academics, economists and marketers.

Conflicts of Interest: Author declares no conflict of interest.

Data Availability Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

References

1. Avolio, B.J. & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *Leadership Quarterly*, 16(3), 315-338. [\[Google Scholar\]](#) [\[CrossRef\]](#)
2. Boyne, G.A., Meier, K.J., O' Toole, L.J., Walker, M.R. (2006). Public Service Performance: Perspectives on Measurement and Management. 319 p. [\[Google Scholar\]](#)
3. Collins, J.C. & Porras, J.I. (1996). Building your company's vision. Harvard Business Review. [\[CrossRef\]](#)
4. Denhardt, J., & Denhardt, R. (2000). The new public service: Serving rather than steering. *Public Administration Review*, 60(6), 549-559. [\[Google Scholar\]](#) [\[CrossRef\]](#)
5. Denhardt, R.B., & Catlaw, T.J. (2014). Theories of public organization. (7th ed.). Cengage Learning Publishing. pp. 105-129. [\[Google Scholar\]](#)
6. Hakobyan, N., Khachatryan, A. (2022). Post-War Anomie in the Field of Management Leadership and Anomie Overcoming Models. *Business Ethics and Leadership*, 6(2), 94-102. [\[Google Scholar\]](#) [\[CrossRef\]](#)
7. Judge, T.A., & Piccolo, R.F. (2004). Transformational and Transactional Leadership: A Meta-Analytic test of their Relative Validity. *Journal of Applied Psychology*, 89(5), 755-768. [\[Google Scholar\]](#) [\[CrossRef\]](#)
8. Kouzes, J.M., & Posner, B.Z. (2007). The leadership challenge (4th ed.), San Francisco, CA: Jossey-Bass. Available at: [\[Link\]](#)
9. Lee, J.Y., Kim, Y., Cha, J., Bachrach, D.G. (2015). Transformational Leadership and Inter-Team collaboration: Exploring the mediating role of Teamwork Quality and Moderating Role of Team Size. [\[Google Scholar\]](#)
10. Lengnick-Hall, C.A., & Beck, T. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human resource management review*, 21(3), 243-255. [\[Google Scholar\]](#) [\[CrossRef\]](#)
11. Papalazarou, I., & Tsoulfas, G. (2018). Principal management concepts in Greek public sector: Part 1 – The common assessment framework. Available at: [\[Link\]](#)
12. Papalazarou, I., & Tsoulfas, G. (2018). Principal management concepts in Greek public sector: Part 2 – Management by objectives. Available at: [\[Link\]](#)
13. Quinn, R.E., & Cameron, K.S. (2011). Diagnosing and changing organizational structure: Based on the competing values framework. John Wiley & Sons publishing. pp. 31-45. [\[Google Scholar\]](#)
14. Rago, P., & McMullin, C. (2011). Leadership and Governance in Times of Crisis: A Balancing Act for Nonprofit Boards. Available at: [\[Link\]](#)
15. Ralli, A. (2019). Leadership and job satisfaction at work: The case of the Greek Ministry of Growth and public investments. [\[CrossRef\]](#)
16. Samantha, I., & Lamprakis, A. (2018). Modern leadership types and outcomes: The case of Greek public sector. *Management*, 23(1), 173-191. [\[Google Scholar\]](#) [\[CrossRef\]](#)
17. Stone, G., & Conley, C.L. (2004). Alternative perspectives on Leadership: Integrating transformational Leadership with Confucian philosophy. *Open Journal of Leadership*, 3(2), 30-38. [\[Google Scholar\]](#) [\[CrossRef\]](#)
18. Tzavella, V. (2022). The leader – manager debate in the Greek public administration: a critical review of the literature and future research agenda. [\[Google Scholar\]](#)