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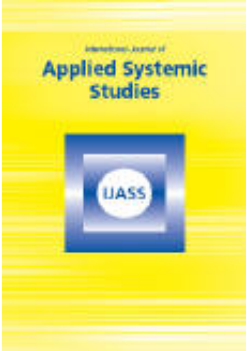

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Leadership and effectiveness: the case of public sector during the COVID-19 pandemic crisis period

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Abstract: This paper aims to examine the leadership in the Greek public sector during the COVID-19 pandemic crisis period. Specifically, it reveals the dominant leadership style, using the full range leadership model. It also determines the overall degree of extra effort, effectiveness, and satisfaction. Finally, it identifies the relationship between each leadership style and leaders' effectiveness, using correlation and regression analysis. The survey was quantitative and involved civil servants employed in various services. The results show that the dominant leadership style is transactional leadership and that transformational leadership has the strongest positive correlation with effectiveness. Given the virtual absence of research during the COVID-19 crisis period in Greece, this paper adds information to the theoretical field of leadership, which can improve produced services of the public sector.

Keywords: leadership; effectiveness; public administration; public sector; COVID-19; pandemic crisis; full range leadership model; MLQ; leadership styles; transformational leadership; transactional leadership; passive leadership.

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1 Introduction

The idea of leadership has always captivated people, and even today, individuals wonder what makes a leader effective. Over the years, many researchers have tried to give satisfactory answers via various surveys. The general conclusion from all this research is that leadership is not a simple concept as many think, but a complex process with multiple dimensions (Northouse, 2019).

The purpose of this paper is to highlight the dominant leadership style during the COVID-19 pandemic crisis in the Greek public sector. Additionally, it examines which leadership style is considered most effective and leads to satisfaction. The choice of the research field was not made by chance. The pathogenic environment of the public sector has aroused our interest. The weaknesses of this environment prevent the implementation of systems that increase productivity (Rossidis et al., 2016). Thus, the ultimate purpose of this research is to contribute to staff recruitment improvement by discovering who are the most appropriate and effective leaders for this environment.

The significance of this paper lies in the fact that it offers essential information to the general theoretical field of leadership. Specifically, three combined factors differentiate this research from others: it takes place in Greece, in the public sector, and at a difficult period for this country. There is a general agreement that leaders' behaviour influences employees' attitudes (Daft, 2016). Hence, by knowing which leadership style is more effective, we can intervene in personnel selection, reinforcing those styles that have the best influence.

For this reason, quantitative research was designed based on the full range leadership model and took place in various public sector organisations to provide a representative sample. It aims to answer several questions like which leadership style dominates in the public sector, which leadership style is more effective, and which one leads to satisfaction.

2 Literature review

Leadership is a concept that many individuals have tried to define. However, each one has included a slightly different perspective on the subject. Most of us believe that we know whether a leader is good or not, and we give concrete examples of behaviour to support our opinion. However, the leader someone admires might be someone else's tyrant. Subjectivity in determining the leader that someone is worth following is an essential component in any discussion about leadership. The prevailing view about the

qualifications of a good leader differs according to the politico-economic conditions of each country, as well as by other organisational factors (Golensky and Hager, 2020).

2.1 Traditional theories

The leadership theories that primarily appeared focused on the characteristics of leaders. Historians developed them by observing the lives of great leaders to identify clues for their success. These theories concerned either experience of the leader or an admirable characteristic. Although they have been considered crucial for understanding the leadership concept, in practical terms have little value. Observing the biography of a great leader, historians could not confidently identify which of the characteristics led one to success. That is because success depends on a combination of traits with situations experienced by the leader during that period. (Conte and Landy, 2019).

In turn, researchers began to observe behaviours in the work environment and classify leaders' actions, either according to task or relationship dimensions. Behavioural theories helped to move the research from leadership traits to leadership behaviour. Although their contribution is considered valuable, these theories also have their weaknesses. First and foremost, they could not demonstrate a sufficient correlation between leadership and effectiveness and ultimately identify the general effective behaviours. Moreover, most surveys have taken place in the US, so the results reflect the American culture and values. Surveys conducted in other countries seem to move in a different direction and highlight different leadership styles (Northouse, 2019).

The failure of both behavioural and leadership traits theories to define a specific model of an effective leader led the researchers in a new direction. The new focus is now on the situation in which the leader operates. The principle of contingency theories is that some behaviours may be effective under certain circumstances, while others may be ineffective. Thus, the effectiveness of a behaviour depends on the situation (Daft and Lane, 2018). The contingency theories indicate how a leader who wishes to improve his effectiveness should behave. However, they have received many criticisms. One of them has to do with the absence of many research findings that would strengthen the foundations of contingency theories. As a result, there is ambiguity regarding certain aspects of leadership, and the conclusions of these theories can easily be considered questionable (Northouse, 2019).

2.2 Modern theories

Modern theories focus on how leaders emerge, influence, and guide the employees and the organisations in which they work (Conte and Landy, 2019). It is worth analysing some of the most popular theories.

2.2.1 Transformational leadership

In 1978, James MacGregor Burns was the first one who introduced the concept of transformational leadership. In this attempt, he described the behaviour of inspired political leaders who could transform their followers. This leadership style thus has to do with the interaction between leaders and followers. In this interaction, each part increases the moral level and motivation of the other. Having a vision of a better world, such leaders can convince their followers to make a difference and participate in implementing

this vision (Conte and Landy, 2019). According to Bass and Avolio (1997), the four transformational leadership elements are:

a Idealised Influence: It describes those leaders who act as role models for their followers. Followers, on the other hand, try to emulate them. The values and the moral behaviour of leaders make followers trust them to carry out a clear mission (Harrison, 2018). Idealised influence includes two components: the characteristics and the behaviour of leaders. Both are assessed based on the perception of followers (Northouse, 2019).

b Inspirational motivation: This category includes those leaders who can convey high expectations to their followers and at the same time inspire them to be involved in the accomplishment of a vision. Team spirit is an essential element of this type of leadership. In this group, leaders using symbols convince their followers to focus on the teams' good and not on their self-interest. In this way, they get better results (Northouse, 2019).

c Intellectual stimulation: It describes leaders who encourage their followers to be innovative and creative and to operate based on their own beliefs and not necessarily on the organisations' views. Leaders, in this case, encourage their followers to use unique ways to solve organisations' problems (Northouse, 2019).

d Individualised consideration: This last category includes those leaders who provide support and understand the individual needs of followers. In this case, leaders act as advisors who want to make their followers operate independently through personal challenges (Northouse, 2019).

2.2.2 Transactional leadership

In 1978, Burns referred to both transformational leadership and transactional leadership. Transactional leadership is the most common type that focuses on the transaction between leaders and followers. In this type, leaders show their followers how to achieve their personal goals by accepting certain rewarding behaviours. If followers want the reward, they adopt the specific behaviour (Conte and Landy, 2019). Transactional leaders, in most cases, clarify the duties and roles of the employees. Their ability to please subordinates leads to increased productivity. They are usually hardworking, fair, proud to be effective, and maintain normality in the workplace. Transactional leaders focus on impersonal aspects of performance using budgets and schedules. They are also dedicated to the organisation and behave according to its culture and rules (Daft, 2016). Transactional leaders follow only two strategies:

a Contingent reward: It has to do with a transaction process between leaders and followers based on predetermined rewards. In other words, leaders and followers agree on the right behaviours and the benefits for those who will comply with them (Northouse, 2019).

b Management by exception: It takes two forms, the active and the passive management by exception. In the first case, the leader closely monitors the processes, and when he detects mistakes, he intervenes to take corrective actions. On the other hand, the second form concerns leaders who only intervene when a problem arises (Northouse, 2019).

2.2.3 Non-leadership factor

The most passive behaviour of a leader, and by extension the most ineffective, is described as laissez-faire leadership. Laissez-faire means do nothing, leave things as they are (Robbins and Judge, 2019). In essence, this form represents the absence of leadership skills. The leader does not deal with his employees, makes no comment on their work, and does not care about their needs. An example of such a leader could be the manager of a small firm who has no plan for the company, acts independently, and makes no contact with his subordinates. As a result, many would presume that a non-leadership form could harm any organisation. Yet, Yang (2015) argues that laissez-faire leadership may be a strategic choice of a leader. For instance, leaders may want to increase employees' independence and create autonomous employees. In other words, the leader empowers his subordinates to lead, and ultimately such behaviour may be effective.

2.2.4 Full range leadership model

Bass and Avolio (1997) argued that there is a hierarchical model. It ranges from non-leadership and ends up to transformational leadership. This model is called a full-range leadership model. It is divided into three levels and it is arranged based on effectiveness. At the lowest level, there is non-leadership, at the medium level there is transactional leadership, and at the highest level there is transformational leadership.

2.3 Public administration and leadership effectiveness

2.3.1 The environment of the public sector

Public administration is closely linked to the governance of the state and specifically to its executive function. While the significance of both public administration and civil servants is unquestionable, no political party of the whole political spectrum has achieved to confront the diachronic 'pathogenesis' of the public sector that affects its effectiveness and, by extension, the proper functioning of the state.

The main problem public administration faces is the existence of many laws. Thousands of regulatory provisions and frameworks lead to a loss of time and a problematic functioning of the institutions. Public organisations have numerous responsibilities that result in many structures for administrative procedures. That causes labyrinths of bureaucracy which contribute to the detriment of public sector effectiveness (Sioutou et al., 2022; Kriemadis et al., 2012; Kriemadis, 2008).

Regarding human resources, there are many kinds of employment relationships, and at the same time, there is an irrational positioning. Subsequently, crucial organisations are understaffed, while others have redundant staff (Karkatsoulis, 2014). On the other hand, staff training is incomplete and based on the knowledge of older employees. Moreover, leaders measure staff performance using poor evaluation systems, which do not contribute to the motivation of employees. In addition, there is no complete performance management system to improve productivity. Finally, it is worth mentioning that the phenomenon of clientelism existing in the field leads to personal relations dependent on various political parties (Rossidis et al., 2016).

In recent years, significant changes have occurred in the public sector regarding digital transformation and the evolution of e-government. Specifically, the COVID-19 pandemic compelled Greece like many other countries to swiftly adopt novel digital

government strategies. It has transformed the function of digital government by revolutionising digital services and implementing innovative approaches to handle the aftermath of the crisis (Dimitrelou and Fouskas, 2023). Therefore, the need to staff the public sector with a leadership style that can respond to new challenges is imperative. An effective leadership style has the power to shape organisational agility and digital transformation by establishing a cultural environment that reflects its mission statement and directs employee actions towards acquiring the necessary skills (AlNuaimi et al., 2022).

Additionally, during the COVID-19 pandemic, the public sector has encountered unprecedented challenges. The primary focus of leaders has been to establish advanced planning, preparation, central design, and strategic measures to effectively respond to the situation. Additionally, leaders must assume a coordinating role in crisis management. Various leadership responsibilities arise during a health pandemic, such as making decisions regarding incentives and disincentives for both public and private entities, as well as followers, to ensure their actions are aligned and contribute to the attainment of shared goals (Bhalla, 2021). Every leadership style has its own challenges when it comes to managing crises. For instance, during an extremely time-sensitive situation, transformational leadership may not be the most suitable approach as it requires time to establish consensus. Likewise, a transactional leader, who is bound by regulations and rules, may not be well-suited to handle the dynamics of emerging crises. Choosing the wrong style during a pandemic crisis can result in ineffective leadership. An effective leader should be capable of demonstrating multiple competencies and styles in a cohesive manner. (Balasubramanian and Fernandes, 2022).

2.3.2 Leadership recruitment process

The last law N° 4369/2016 describes the process of leadership selection which is in force. The filling of a responsibility position requires the existence of a vacancy and the submission of candidacy. Official councils are responsible for the implementation of the procedure. Organisations determine candidacy requirements which include the education sector, and various additional qualifications (Spanou, 2018).

The current system is more contemporary than all the previous ones and includes two phases. In the first one, candidates receive points for their experience and qualifications, while in the second, candidates give an interview. Concerning the evaluation of the candidate, four categories of criteria have been defined:

a creativity, interest, perception, knowledge of the subject

b behaviour, cooperation with colleagues

c administrative skills

d effectiveness (Rammata, 2017).

Even though the new recruitment process is considered more meritocratic, it also has its weaknesses. Although the qualifications (experience, training, etc.) ensure the objectivity of the process often lead to formalism. On the other hand, the essential qualifications highlighted in the interview can lead to discrimination in candidate selection. Due to the fact that candidates do not believe that the interviewer's judgment is meritocratic, they try

to get as many qualifications as possible. A system based on the achievement of goals would be a better choice. (Spanou, 2018).

The current regulations cannot predetermine that the law will be successful, although they are in the right direction. Multiple criteria such as interview, experience, evaluation, and formal qualifications make the process extremely complex (Rammata, 2017) and do not necessarily lead to the best leaders' selection.

2.4 Summary

The contribution of the literature review in understanding the field of leadership and simultaneously the public sector is an undeniable fact. Trait theories have highlighted the strong and consistent relationships between personality and leadership. The main contribution of behavioural theories is the segregation of leaders into two groups, those who are task-oriented and those who are relationship-oriented. Contingency theories appeared subsequently to improve behavioural approaches, taking the situation into account. Yet, contemporary leadership theories have offered the most significant contribution to leadership effectiveness understanding (Robbins and Judge, 2019). For all the above, we chose to examine the full-range leadership model. Moreover, the examination of the field of research revealed that the public sector has diachronic pathogenesis that may negatively affect the effectiveness of leaders. Finally, the current law regarding the leadership recruitment process probably does not lead to the most appropriate leadership selection.

3 Methodology

The primary objective of this research is to identify the dominant leadership style in the Greek public sector, using the theory of the full range leadership model. In practice, we asked civil servants about their supervisors' behaviour, and then we classified them into the following three leadership styles:

a transformational

b transactional

c passive leadership.

An additional aim of this research is to discover the most effective leadership style. Our research objectives can take the form of the following research questions:

1 Which of the three leadership styles (transformational, transactional, passive) dominates in the field of public administration?

2 What is the overall extent of effectiveness of leadership behaviour, the satisfaction of leadership behaviour, and extra effort of civil servants?

3 What is the relationship among the three leadership styles and the effectiveness of leadership behaviour?

Regarding the last question, we must test the following three hypotheses:

H1 There is a positive correlation between transformational leadership and the effectiveness of leadership behaviour.

H2 There is a positive correlation between transactional leadership and the effectiveness of leadership behaviour.

H3 There is a positive correlation between passive leadership and the effectiveness of leadership behaviour.

Furthermore, we want to test whether each leadership style has a positive or negative effect on leadership effectiveness and to what extent. Therefore, a quantitative survey was conducted, using descriptive statistics to answer the first two questions and Spearman's correlation coefficient for the third one. To discover the effect of the three leadership styles on leadership effectiveness, we used multiple regression.

3.1 Survey instrument

Our research tool is the multifactorial leadership questionnaire (MLQ–5x) developed by Bass and Avolio. We asked for permission to use the questionnaire from the Mind Garden company, which we received on 5/3/2021. The permission regarded 100 questionnaires. The company undertook the adaptation of the questionnaire into the Greek language and provided it to us in a ready-to-use format, along with the accompanying license. In the first part of the questionnaire, there are questions regarding the demographic characteristics. The central part consists of 45 questions concerning leadership. The 36 of them have to do with leadership factors, and the remaining nine with the leadership outcomes, which are:

a extra effort

b effectiveness

c satisfaction from leadership behaviour.

The questions consist of descriptive statements regarding supervisors. Respondents were asked to indicate the frequency at which their supervisor exhibits each statement. The authors used a five-point Likert scale response system with values ranging from 0 to 4. Specifically, 0 = not at all, 1 = once in a while, 2 = sometimes, 3 = fairly often, and 4 = frequently, if not always. (Bass and Avolio, 1995).

The survey took place in March 2021. At that period, Greece was under lockdown due to the COVID-19 pandemic crisis. Specifically, there were restrictions on all non-essential movements throughout the country. Under those circumstances, we sent the questionnaires via email to public sector employees. We randomly selected various organisations in different regions to have a good sample distribution. With a cover letter, we informed participants of the purpose of the survey and the importance of their participation. We clarified that we will use the data only for research purposes and that the completion of the questionnaire is anonymous. The participants were encouraged to answer honestly, mentioning there is no wrong answer (Zafeiropoulos, 2015). We sent 505 emails, and the total number of questionnaires received was 100. Due to remote work, there were difficulties regarding the collection. Thus, the response rate was around 19.80%, quite satisfactory if we consider the conditions.

4 Results

4.1 Reliability and validity analysis

It is necessary to test the reliability and validity of the questionnaire before the presentation of the results. The most popular measure of scale reliability, Cronbach's alpha or coefficient alpha, was used for the reliability analysis. The coefficient tests the internal consistency of the research instrument, in other words, the pairwise correlation of answers with questions (Saunders et al., 2019).

For this reason, we divided the questionnaire into four parts. The first three relate to the three leadership styles, while the fourth to leadership outcomes. Table 1 presents the results.

Table 1 Reliability analysis

Part of questionnaire	*Cronbach's alpha*	*N of items*
Transformational leadership	0.946	20
Transactional leadership	0.788	8
Passive leadership	0.833	8
Outcomes of leadership	0.965	9
Entire questionnaire	0.946	45

All values of the coefficient (0.788 to 0.965) are acceptable since they are higher than 0.7. The above analysis indicates the existence of the internal consistency of the questions.

Furthermore, we sent the questionnaire to researchers and leadership professionals to confirm the validity of the content. All of them verified that the questionnaire adequately describes the investigated concept.

4.2 Demographics

Table 2 summarises the results of the demographic analysis. As we can see, most civil servants are women aged 35–44 years old, married with a master's degree, having more than ten years of work experience.

Table 2 Demographic characteristics

Gender	*Age*	*Marital status*	*Education*	*Years of experience*
Female: 63%	< 24: 0%	Single: 38%	High school: 8%	< 2: 3%
Male: 37%	25–34: 7%	Married: 54%	Bachelor: 32%	2–4: 13%
	35–44: 57%	Divorced: 8%	Master: 54%	5–7: 6%
	45–54: 32%		Doctorate: 6%	8–10: 10%
	55 >: 4%			>10: 68%

4.3 Leadership styles results

In the 36 questions concerning the leadership styles, the respondents described how often their supervisors exhibit specific behaviours. Afterward, we categorised them into one of

the three leadership styles of the full range leadership model. In this way, we can detect which of the three leadership styles dominates the field of public administration. For the data analysis, we used the mean and the standard deviation. Table 3 illustrates the results.

Table 3 Leadership styles

Descriptive statistics			
Leadership factors		*Mean*	*Std. deviation*
1	Idealised influence – attributes	1.84	1.07
2	Idealised influence – behaviour	1.78	0.87
3	Inspirational motivation	1.74	1.02
4	Intellectual stimulation	1.83	0.95
5	Individualised consideration	1.73	0.79
Transformational leadership		1.78	0.84
6	Contingent reward	1.90	0.95
7	Management by exception (Active)	1.78	0.80
Transactional leadership		1.84	0.74
8	Management by exception (Passive)	1.54	0.83
9	Laissez-faire	1.38	0.87
Passive leadership		1.46	0.77

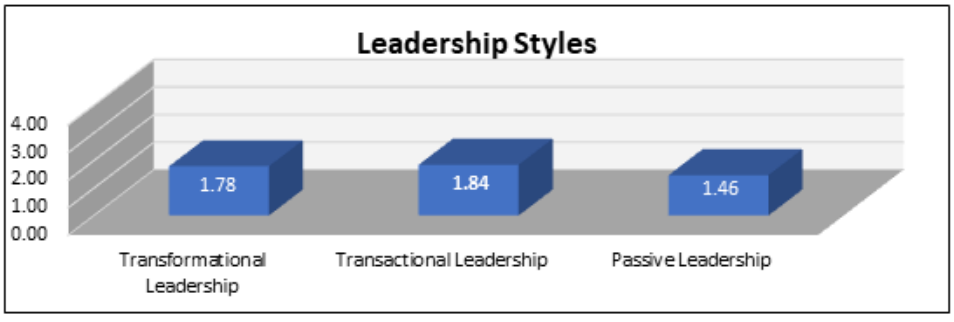
According to Table 3, the dominant leadership style in the Greek public sector is transactional leadership (M = 1.84, S.D. = 0.74) since it has the highest mean of 1.84. The mean contains the analysis of the two transactional leadership factors, the contingent reward (M = 1.90, S.D. = 0.95) and the management by exception (active) (M = 1.78, S.D. = 0.80). The contingent reward has the highest mean (1.90). Hence, most leaders in the public sector operate giving rewards. Additionally, they closely supervise the procedures to avoid mistakes and intervene to correct them.

The next leadership style is transformational leadership (M = 1.78, S.D. = 0.84) since it has the second-highest mean. Next, the mean results from five leadership factors: the largest value of these factors has the idealized influence – attributes (M = 1.84, S.D. = 1.07) and follows the intellectual stimulation (M = 1.83, S.D. = 0.95). The third factor is the idealised influence – behaviour (M = 1.78, S.D. = 0.87), while the inspirational motivation fourth (M = 1.74, S.D. = 1.02). The last factor is individualised consideration (M = 1.73, S.D. = 0.79). From all above, we understand that the second leadership group of the public sector is transformational leaders. The character and behaviour of these leaders help them act as role models for employees and encourage them to be innovative. But they seem to lack understanding of their employees' individual needs.

The last leadership style identified in the public sector is passive leadership (M = 1.46, S.D. = 0.77). Although 1.46 is the lowest mean value, it is counted quite high for this style. The mean in this case is determined by two leadership factors, the passive exceptional administration (M = 1.54, S.D. = 0.83) and the laissez-faire factor (M = 1.38, S.D. = 0.87). Therefore, the main characteristic of passive public leaders is that they intervene only when a problem arises, while many are generally absent.

The standard deviations of all three leadership styles indicate that data are close enough to the mean.

Figure 1 Leadership styles (see online version for colours)



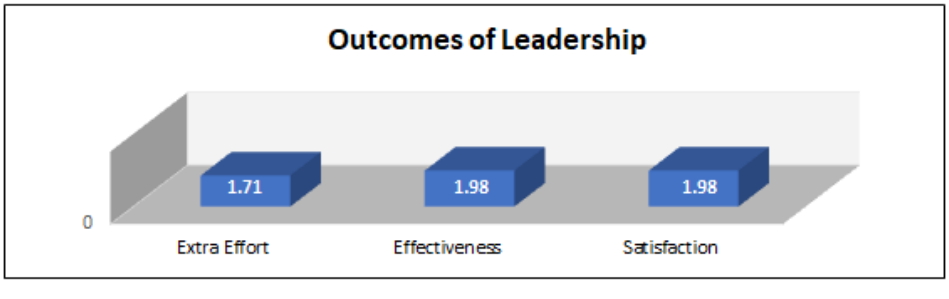
4.4 Leadership outcomes results

The remaining nine questions concern the leadership outcomes and answer the second research question about the overall extent of effectiveness of leadership behaviour, the satisfaction of leadership behaviour, and extra effort of civil servants. For the answer, we used descriptive statistics, and in Table 4, we present the results.

Table 4 Outcomes of leadership

	Descriptive statistics	
Leadership outcomes	*Mean*	*Std. deviation*
Extra effort	1.71	1.19
Effectiveness	1.98	1.18
Satisfaction	1.98	1.12

Figure 2 Outcomes of leadership (see online version for colours)



As shown in the table, the effectiveness of the leadership behaviour received an average value of 1.98. It is a moderate value in terms of frequency since it corresponds to the middle of the Likert scale (sometimes). The standard deviation has a relatively high value of 1.18. Thus, according to civil servants, effectiveness from leadership behaviour is not a frequent phenomenon and only occurs sometimes.

Regarding satisfaction from leadership behaviour, we do not notice significant differences. Similarly, in this case, the average value is 1.98. As mentioned above, this value corresponds to the middle of the Likert scale (sometimes). The standard deviation

received a value of 1.12. Therefore, satisfaction from leadership behaviour was rated with a moderate value by civil servants since it appears only sometimes.

Finally, the extra effort, which measures whether leaders are leading their employees to try harder, received a mean value of 1.71, which is below the middle of the Likert scale. Standard deviation appears with a value of 1.19. The leaders of the public sector, in many cases, do not contribute to employees' extra effort with their behaviour.

4.5 Correlation analysis between leadership styles and effectiveness

After the leadership styles and outcomes presentation, the authors are ready to answer the next research question: what is the relationship among the three leadership styles and the effectiveness of leadership behaviour. For this question, we used inferential statistics, and more specifically, Spearman's correlation coefficient. We selected the specific coefficient because the data is ordinal (Saunders et al., 2019). Table 5 illustrates the results and as we can see all values are statistically significant (p-value =0 < 0.01).

Table 5 Correlation analysis between leadership styles and effectiveness Spearman's rho correlations

		Extra effort	*Effectiveness*	*Satisfaction*
Transformational leadership	Correlation coefficient	0.893**	0.854**	0.874**
	Sig. (2-tailed)	0.000	0.000	0.000
Transactional leadership	Correlation coefficient	0.708**	0.698**	0.693**
	Sig. (2-tailed)	0.000	0.000	0.000
Passive leadership	Correlation coefficient	–0.437**	–0.492**	–0.503**
	Sig. (2-tailed)	0.000	0.000	0.000

Note: **Correlation is significant at the 0.01 level (2-tailed).

The first hypothesis tested is H1: There is a positive correlation between transformational leadership and the effectiveness of leadership behaviour. Table 5 shows that the coefficient value is ($\rho = 0.854$, $p < 0.001$). First of all, this positive value indicates a positive correlation between transformational leadership and leadership effectiveness. Moreover, the absolute value demonstrates that the correlation is very strong since it approaches the unit. So, we accept the first hypothesis – H1.

According to Table 5, the transformational leadership is also positively correlated with satisfaction ($\rho = 0.874$, $p < 0.001$), and with the extra effort ($\rho = 0.893$, $p < 0.001$). In both cases, the correlation is also very strong.

The following hypothesis tested is H2: There is a positive correlation between transactional leadership and the effectiveness of leadership behaviour. The coefficient, in this case, received the value ($\rho = 0.698$, $p < 0.001$). The coefficient is positive, so there is a positive correlation between transactional leaders and effectiveness. So, we also accept the second hypothesis – H2.

From the rest coefficients of the transactional leadership, we understand that there is a positive correlation with the rest leadership outcomes, that is, the satisfaction ($\rho = 0.693$, $p < 0.001$) and the extra effort ($\rho = 0.708$, $p<0.001$).

The last hypothesis tested is H3: There is a positive correlation between passive leadership and the effectiveness of leadership behaviour. The sign of the coefficient ($\rho = –0.492$, $p<0.001$) demonstrates a negative correlation between passive leadership

and effectiveness, while the absolute value indicates a relationship with moderate strength. Thus, we reject the last hypothesis – H3.

The remaining values of passive leadership also show a negative correlation both with satisfaction ($\rho = -0.503$, $p < 0.001$) and with the extra effort ($\rho = -0.437$, $p < 0.001$).

4.6 The effect of leadership styles on effectiveness

After the correlations it was necessary to take the analysis one step further, so a multiple regression model was applied to determine the effect of leadership styles on effectiveness. In our case, effectiveness is the dependent variable, while the independent variables are the three leadership styles (transformational, transactional, and passive leadership) of the full range leadership model. Tables 6 and 7 illustrate the results.

Table 6 Model summary

Model	*R*	*R square*	*Adjusted R square*	*Std. error of the estimate*
1	0.879[a]	0.773	0.766	0.56940

Notes: [a]Predictors: (constant), passive leadership, transactional leadership, transformational leadership
Dependent variable: effectiveness.

From the model summary and specifically from the coefficient of determination r2= 0.773, we conclude that 77.3% of the variation in effectiveness is explained by the variation in the three independent variables (transformational, transactional, and passive leadership) placed in the model.

Table 7 Regression analysis coefficients[a]

Model		*Unstandardised coefficients*		*Standardised coefficients*	*t*	*Sig.*
		B	*Std. error*	*Beta*		
1	(Constant)	0.469	0.216		2,166	0.033
	Transformational leadership	0.994	0.124	0.711	7,993	0.000
	Transactional leadership	0.126	0.135	0.080	0,935	0.352
	Passive leadership	–0.338	0.080	–0.222	–4,225	0.000

Note: [a]Dependent variable: effectiveness.

Table 7 displays the results of the multiple regression analysis. The constant factor $b_0 = 0.469$ demonstrates the effectiveness level if the three independent variables equal 0.

The most significant positive effect on effectiveness derives from transformational leadership ($B_1 = 0.994$, Sig. < 0.05). This value implies that for each increase by one unit in transformational leadership, there will be a subsequent increase of 0.994 in leadership effectiveness. Additionally, this variable is statistically significant since (Sig. = 0,000 < 0.05).

Transactional leadership seems to have a marginally positive effect on effectiveness ($B_2 = 0.126$, Sig. > 0.05). B_2 value indicates that for every increase by one unit in transactional leadership, there will be a subsequent increase of 0.126 in leadership effectiveness. Unfortunately, this variable is not statistically significant since Sig. = 0.352 > 0.05, and therefore, we cannot include it in the regression equation.

The last variable, passive leadership has a negative effect on effectiveness ($B_3 = -0.338$, Sig. < 0.05). The coefficient implies that for each increase by one unit in passive leadership, the leadership effectiveness will decrease by 0.338. This variable is considered statistically significant since Sig. = 0.000 < 0.05.

Hence, the regression equation that supports the dominance of transformational leadership on effectiveness, and simultaneously the negative effect of passive leadership on effectiveness takes the following form:

$$\text{Effectiveness} = 0.469 + 0.994 * \text{Transformational Leadership} - 0.338 * \text{Passive Leadership}$$

4.7 Discussion of findings

The above result analysis concludes that the dominant leadership style in the Greek public sector is transactional leadership. The leadership style that appears after that is transformational leadership, while the last one is passive leadership. The leadership style with the strongest positive correlation with effectiveness is transformational leadership. Moreover, the same leadership style has a strong correlation also with the other two leadership outcomes (satisfaction and extra effort). Transactional leadership also seems to have a positive correlation but with less strength as far as effectiveness, leadership satisfaction, and extra effort are concerned. Passive leadership is the only style that negatively correlates with the three leadership outcomes. According to the multiple regression analysis, the statistically significant variables are only transformational and passive leadership. The first one has a positive effect, while the second negatively affects leadership effectiveness.

These results are not surprising since several other similar surveys agree with them. Research conducted, for instance, in Greek secondary education showed that the style with the strongest positive correlation with effectiveness is that of transformational leadership, transactional leadership follows, and passive leadership appears with a negative correlation (Kalliontzi and Iordanidis, 2019). There are similar results in a 2018 survey conducted in Greek primary education. In this case, also, transformational leadership has a stronger correlation with effectiveness, while passive leadership has a negative one (Antoniou et al., 2018). In the field of military services, results do not differentiate. Research published in 2020 shows that transformational leadership is the most effective style (Stefou, 2020). Ultimately, the findings converge throughout the country, regardless of the working environment in which the research took place, showing that a human-centred leadership approach is the one that suits Greece to achieve satisfactory results.

Results abroad are differentiated. For example, a survey conducted in India in 2016 displays that, although transformational leadership proves to be the most desirable style, it seems that transactional leadership has an impact with greater strength on effectiveness (Sudha et al., 2016). However, a recent survey conducted at a Military University in Norway has revealed that transformational leadership is more effective, as it plays a crucial role in enhancing follower work engagement and performance. This is primarily attributed to its ability to promote follower behaviours, such as utilising personal strengths and taking initiative. Transformational leaders effectively inspire and empower their followers, enabling them to tap into their character strengths and become self-leaders (Bakker et al., 2022). Similarly, another survey conducted in 2021 among the

academic staff of public sector universities in Pakistan revealed that transformational leadership proves to be more effective. This is attributed to its positive correlation with innovative work behaviour (Rafique et al., 2022)

The dominance of the transactional leadership style in the public sector, on the other hand, does not necessarily come into agreement with most research findings (Dimopoulos and Iordanidis, 2019; Otieno and Njoroge, 2019; Kalliontzi and Iordanidis, 2019). In the specific cases, surveys conducted in various sectors prove that transformational is the dominant leadership style. The fact that the public sector has peculiarities explains this differentiation. In particular, it is worth mentioning that the powerful centralism in decision-making from the political leadership (Rossidis et al., 2016) makes the transactional style more accessible to the functioning of the public administration. Political leadership is not looking for leaders who want to transform organisations but individuals who are willing to implement their decisions. Thus, transactional leaders who operate according to predetermined goals and timetables are more suitable for public policy implementation. Yet, this situation works against the organisations' effectiveness.

5 Conclusions and proposals

5.1 Conclusions and implications

The findings of this research, according to correlations, are absolutely in line with the theory of the full range leadership model since leadership styles in the Greek public sector are ranked based on effectiveness, starting from the lowest level, the passive leadership, and ending at the highest, the transformational leadership.

Furthermore, our research revealed that the supervisors' majority of the public sector follow the transactional approach, clarifying work requirements, determining employees' roles, emphasising planning, providing rewards, and caring for subordinates' needs (Daft, 2016). The second group of supervisors, which do not constitute the majority, follows the transformational approach, inspiring and motivating employees, who, in turn, try to imitate them. The supervisors' character and moral behaviour make employees want to follow them in achieving a vision, therefore, they bring innovation to organisations, form values, build relationships, and give meaning to their followers (Daft, 2016). The last leadership style in the public sector is the passive one. The minority of supervisors, delays in decision-making, intervenes only when a problem arises and neither deals with the needs of employees, nor contributes to their development (Northouse, 2019).

The conclusions of this research are particularly significant since they add essential knowledge to the leadership field. Political leadership could use this knowledge to improve the quality of a public organisation. Specifically, they indicate that the Greek public sector can be effective by recruiting more leaders who emphasise on transformational approach since this style has the strongest positive correlation with effectiveness. Leaders who interact with their subordinates increase both the level of motivation and ethics. Leaders who stand by the employees, understand their needs, and inspire them to try harder. By extension, this will lead to better services, more productive and efficient employees, and generally to a well-functioning and independent public administration.

5.2 Suggestions for improvement

The Greek public administration structure gives supervisors the responsibility only to implement the decisions of each political leadership. Thereby, all their knowledge, experience, ideas, visions, and character are left unexploited since they do not participate in crucial administrative decisions. Therefore, the first suggestion is to expand their role in the decision-making management field, or at least they should be allowed to cooperate more closely with the political leadership and co-decide on fundamental public administration issues.

Another suggestion concerns the re-examination of the leadership recruitment process. Evaluating the research findings that the public sector needs more transformational leaders, it would be essential to reform the specific direction of the recruitment process. For instance, in the existing institutional framework, we could keep the evaluation criteria, and we should reinforce the interview process by choosing individuals with vision, high ambitions, and innovative ideas. However, the evaluation team should be meritocratic and without any political influence.

Furthermore, staff training and evaluation of both supervisors and civil servants should be constant, objective, and always focused on the needs of employees, without any punitive purpose. On the other hand, human resources departments should provide all the appropriate tools to assist leaders in staff training and employee development (Ntaikos, 2019). Employees will therefore be able to constantly improve their skills, having the appropriate equipment available (Terzi et al., 2017).

Finally, the current legislative framework requires vital reforms regarding staff productivity improvement. These reforms should emphasise innovations, initiatives, and results. In addition, we should redesign and re-segment all job position responsibilities and qualifications and create a new system of measuring staff performance and motivation. It is also essential to have a depoliticisation of the public sector by distinguishing the political leadership from public administration management and incorporating contemporary practices applied to European organisations (Rossidis et al., 2016).

5.3 Limitations and recommendations for further study

Despite the importance of this research, it is not without limitations. First of all, it is based only on the full-range leadership model. In other words, we included only three leadership styles in the model, ignoring others that may exist and simultaneously affect effectiveness in the public sector. Additionally, we cannot underestimate the difficulties we faced during the collection of questionnaires. Most of the respondents were remotely working at that period due to the COVID-19 lockdown, and it was impossible to reach them. As a result, there was a limited sample, which under other circumstances, could have been more representative.

Future research could take place under normal circumstances with a larger sample. In this way, we can identify whether the results were affected by the prevailing conditions of the COVID-19 pandemic crisis or not. Finally, the same research could take place in different European countries to compare the results and identify the differences among the countries.

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