

## **Continuous Unplanned Changes and Stress in Greek Public Sector due to Economic Crisis**

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### **Abstract**

*The aim of this study is to determine the main factors influencing the perceived stress levels of public servants due to the recent unplanned changes in Greece. Responses from 811 public servants were obtained to determine the effects of newly imposed legal and operational reforms on stress in relation to demographic variables. Logistic regression was applied given that work stress due to organizational changes was identified as a binary variable. It was found that women, the less educated, low-level and permanent employees experienced higher levels of stress compared to the other categories. Exogenous factors related to the new imposed reforms in working conditions due to the economic crisis (job insecurity, personnel reductions, workload, demands for highly educated employees, decrease on wages) and negative socioeconomic consequences (high levels of unemployment, expensive standard of living, high taxation, mortgage repayment difficulties) are the ones increasing the employees' stress, which they cannot control and easily cope with.*

**Keywords:** Reforms, economic crisis, change management, unplanned changes, organizational changes, exogenous factors, perceived stress, public servants, Greece

### **1. Introduction**

As a result of the severe economic crisis, Greece in 2010 referred to the European Commission, International Monetary Fund, and the European Central Bank, to seek for financial assistance, in order to preclude the total collapse of the economy. Thus, a memorandum of economic and fiscal policies was signed to establish the framework of a financial stabilization mechanism, provided that Greece will implement the imposed economic and financial adjustment program. The adopted decision settled out the necessary measures to be taken by Greek authorities in order to ensure budgetary consolidation reducing deficit in turn. The required measures were characterized by austerity leading to enormous unemployment and high levels of government deficit and debt (Priporas et al., 2015). Regarding the public sector, new policies were implemented including among others salary and benefits reductions, workload, demand for highly educated employees, redundancies, relocations, closure and mergers. The changes imposed to the Greek public sector can comprise unplanned changes which come from unexpected events or crises derived from the external environment and are observed when pressures for change overcome the efforts of the organization to resist (Champoux, 2010: 456; Knowles and Saxberg, 1988).

On the other hand, planned or managed changes are conscious decisions and purposively modulated by the organizations (Coram and Burnes, 2001) in contrast to unplanned changes, which are also referred as emergent, unpredictable, unintentional and iterative (Liebhart and Garcia-Lorenzo, 2010). Regarding the Greek public sector it is also noted that until 2010, it did not implement significant managerial reforms, while it was characterized by bureaucracy and high centralization among other factors (Spanou, 2008) leading to low performance and inefficiency. For these reasons, a large number of changes and practices were taken place, as to reduce the administrative costs and to increase the organizations' efficiency (Plimakis and Papadakis, 2017), thus influencing and affecting the working life of the public servants. There are many indications that the financial crisis in Greece is influencing the psychology due to the decreased quality of work (Kakana et al., 2017) and the stress levels of the public servants' (Mouza and Souchamvali, 2016; Nella et al., 2015). In this context, the current study aims to explore the perceived stress of the public servants deriving from the imposed unplanned reforms which unexpectedly changed their lives and working conditions.

Until now it was not found any published study, investigating the consequences of the organizational changes in Greece caused by the economic crisis, on the stress of the public servants working in different sectors, in relation to demographics, working and socio-economic factors.

## **2. Literature Review**

Due to continuous changes in the markets worldwide, organizations must respond to new challenges posed by the competition in their environment to gain competitive advantage. Thus, they have to deal constantly with changes to boost their organizational capability. In this context, many researchers have made extensive efforts to investigate how changes can be effectively managed and how they could affect both organizations and their employees. The main aim was to formulate strategies, policies, and practices that would enable organizations to have a controllable and smooth transition to the new environment. For this purpose, it has been investigated how to improve ability to adapt to changes and how to manage and engage the employees' work attitude and behavior in the ongoing process (Bartlett and Ghoshal, 2002), when the main body of literature is based on well planned and organized changes to achieve the best results. The transition process is well recognized to have many adverse consequences on employees' psychological health (Størseth, 2006), as they are obliged to confront and adapt to the new changes. Rafferty and Griffin (2006a) identified three characteristics influencing employees under changing circumstances: the planning of such changes, regarding prior preparation and knowledge; the frequency of change, mainly due to high levels of perceived uncertainty; and the impact of change, specifically the influence on employees' lives and work.

Changes have negative impact on peoples' life, due to the feeling of insecure threat (Fugate et al., 2012), resulting to high levels of stress (Bordia et al., 2004). Changes at work have also been found to have major consequences on peoples' life when the needed adjustments seriously affect them (Parkes, 1971). Considering that the employees react negatively and resist to changes (Vakola and Nikolaou, 2005) not only before but also after their implementation (Smollan, 2015), researchers tried to identify the causes and propose strategies to reduce the resistance (Hernandez and Scotti, 2007) and systematically examined the individuals' change-response stages (Elrod and Tippett, 2002). The adjustment to the new environment can be particularly stressful and can be completed in a long time of periods, specifically when changes are perceived as threatening, and the employees are not ready and prepared to deal with them (Grzybowska, 2007). On the other hand, organizations have to consecutively and straightway respond to market trends and competitors and frequently implement changes to their organization and operation methods. These have direct consequences on their employees' working life and way of doing things (Trader-Leigh, 2002), as it is required to be flexible and adaptable to the rapidly changing conditions (Lorenzi and Riley, 2000) and are managed to swiftly and efficiently follow the new strategies and processes (Smith, 2005).

In view of the economic recession, many researchers examined the consequences of the employees' decreased health status due to organizational changes in the frame of reorganizations, downsizes and perceived job insecurity. The negative results and the effects of the implemented downsizing were extensively examined at the Finland's public sector. In particular, Vahtera et al. (1997) found an increase in long-term absence of the government employees, indicating the consequences of personnel reductions and the final cost results of the expected economic benefits. Additionally, for the remaining permanent employees, increased rates of sickness absence and cardiovascular mortality (Kivimäki et al., 2000; Vahtera et al., 2004) were observed. The adverse results of the downsizing were also highlighted as it was found an increased use of hypnotics among men survivors and anxiolytics for women (Kivimäki et al., 2007).

The association of the implemented downsizing processes in relation to the existence of depressive symptom was also examined by Brenner et al. (2014) in four European countries. In this particular research, it was found that both layoff victims and survivors experienced high levels of depression and also those who agreed with the downsizing process as being necessary, right and democratic were less affected. Besides, Snorradóttir et al. (2013) investigated the experienced distress of the surviving bank employees in Ireland. The researchers found that those who were involved in restructuring procedures, such as employed in downsized departments, when transferred and experienced salary reductions perceived higher levels of distress. Additionally, Burchell (2011) examined two datasets of employees in UK and reported that the emergence of perceived job insecurity due to future uncertainty was positively related to the increase of anxiety and depression for at least one year with no indication to be stabilized.

The adverse results on public servants' stress due to the economic recession were also noted by many researchers in different countries. Regarding a UK public organization, Ravalier et al. (2014) found that for the examined year, the public servants increased their accomplishments at work and their levels of exhaustion and cynicism. Concerning Ireland, Houdmont et al. (2012), investigated the differences in civil service employees' work-related stress and stress related absence between two time periods, before and after the economic recession (i.e. 2005 and 2009). Findings suggested that the examined variables were positively related to the financial crisis. In Spain, Grau-Grau (2013) reported that employees working in the public administration perceived high level of stress during the economic recession. In this study a comparison of the work stress levels was attempted before (2006) and during (2010) the financial crisis and an increase of 24% was found between the years considered. Regarding Greece, Nella et al. (2015) showed that administrative public servants, who were under the process of suspension as to be decided whether they would be transferred to other services or laid-off, recorded higher levels of perceived anxiety, stress and depression, compared to other employees who were not included to the particular mobility scheme. Additionally, Mouza and Souchamvali (2016) revealed that the newly implemented reforms on public sector due to the economic crisis, were associated with increased stress levels of the primary school teachers. Factors as reduction of wages, job insecurity and new assessment methods, were the main causes of their perceived anxiety.

### **3. Method**

#### **3.1. Respondents**

Respondents were public servants in the area of the Prefecture of Central Macedonia, Greece. One thousand questionnaires were distributed and 857 were collected. After excluding 46 questionnaires with missing data, the final sample of 811 cases resulted to a net respond rate of 81.1%. It should be noted that the questionnaires were completed anonymously. A representative percent of respondents working to various public sectors participated at this research, where 27% (n=219) comes from education, 29.1% (n=236) from municipality, 24.4% (n=198) from the health sector, 10.7% (n= 87) from the police and 8.8% (n=71) from the military.

#### **3.2. Demographical features**

In the statistical analysis, nine independent variables were initially considered, to depict the possible effect of some personal and job related factors on the dependent variable which is the realized stress at work due to the new imposed reforms due to the economic crisis. Demographic details of participants such as gender, age, work experience, marital status, number of children, educational level, working status, type of employment and salary per month are presented in Table 1.

#### **3.3. Procedure**

All participants were asked whether they perceived stress at work due to the existing and impending organizational changes and reforms, related to the newly imposed policy measures (personnel reductions, decrease on wages, workload, demands for highly educated employees, redundancies, relocations, enactment of new labor relations and assessment methods) which were launched at Greece in an attempt to decrease the public expenditure and to increase its efficiency. The implication of these measures started at 2010 and till now the continuant changes have great effect on the public servants' life and work. In addition, as the government seeks to achieve a sustainable recovery, more new measures are expected to be implemented. In our questionnaire the public servants had to answer whether they were stressed (1) or not (0). These are the values of the binary dependent variable considered. It is noted that 475 participants (58.6%) stated that they do feel stressed. For the relevant statistical analysis the SPSS 17.0 for Windows was used.

**Table 1. Demographic details of the study sample**

<i>Gender</i>	N	%
Male	370	45.6
Female	441	54.4
<i>Age</i>		
20-30 years	58	7.2
31-40 years	272	33.5
41-50 years	361	44.5
51-60	112	13.8
61 years and more	8	1.0
<i>Work experience</i>		
0-6 years	118	14.5
7-12 years	227	28.0
13-21 years	302	37.2
22-31 years	152	18.7
32 years and more	12	1.5
<i>Marital Status</i>		
Married	558	68.8
Unmarried	210	25.9
Other	43	5.3
<i>Number of Children</i>		
0 children	243	30.0
1 child	154	19.0
2 children	327	40.3
3 children	72	8.9
4 children and more	15	1.8
<i>Educational level</i>		
Elementary School	6	0.7
High School	160	19.7
Technical Institution	165	20.3
University	339	41.8
Post Graduate	128	15.8
Ph.D. holders	13	1.6
<i>Working status</i>		
Employee	652	80.4
Head officer	90	11.1
Director	69	8.5
<i>Type of employment</i>		
Permanent employees	593	73.1
Open-ended employment contract employees	164	20.2
Fixed term employment contracts employees	54	6.7
<i>Salary per month</i>		
300-700 €	53	6.5
701-1000 €	238	29.3
1001-1500 €	421	51.9
1501-2000 €	85	10.5
2001 € and more	14	1.7

4. Results

The results obtained after properly estimating this model give the possibility to obtain unbiased predictions regarding the probability of an individual (employee) with pre-specified characteristics to realize increased level of stress. The binary variable “perceived stress due to the imposed organizational changes and reforms” was the dependent variable of the model whereas the variables presented at Table 2 were considered as the explanatory variables initially. In Table 2 where the estimation results are presented, we observe that five coefficients are insignificant since the corresponding p-values are much greater than 0.10 and 0.05 (levels of significance 10% and 5% respectively). It is noted that the computation of p-values was based upon the Wald statistic. The results obtained after omitting the corresponding five variables are presented in Table 3.

**Table 2. Initial results estimation with all explanatory variables. Dependent variable: Perceived stress in work due to organizational changes and imposed reforms**

	Est. coeff. ( $\hat{b}_j$ )	SE( $\hat{b}_j$ )	Wald stat.	p-value
Gender	0.321	0.150	4.575	0.032
Age	0.033	0.125	0.069	0.793
Work Experience	0.048	0.107	0.198	0.656
Marital Status	-0.186	0.182	1.044	0.307
Number of Children	0.032	0.093	0.120	0.729
Educational Level	-0.444	0.077	33.342	0.000
Work Status	-0.253	0.130	3.809	0.050
Type of Employment	-0.430	0.130	10.981	0.001
Salary	-0.009	0.114	0.006	0.939
Constant	2.780	0.500	30.874	0.000

It is recalled that  $\hat{b}_j$  is the estimate of  $b_j$ .

**Table 3. Final results. Estimation after excluding the variables with insignificant coefficient**

	Est. coeff. ( $\hat{b}_j$ )	SE( $\hat{b}_j$ )	Wald statistic	p-value	OR ( $e^{\hat{b}_j}$ )	Percent of change	95% CI
Gender	0.328	0.149	4.817	0.028	1.388	38.8%	1.036-1.860
Educational Level	-0.448	0.074	36.227	0.000	0.639	-36.1%	0.552-0.736
Work Status	-0.250	0.122	4.202	0.040	0.779	-22.1%	0.613-0.989
Type of Employment	-0.430	0.128	11.213	0.001	0.650	-35.0%	0.506-0.837
Constant	2.683	0.369	52.864	0.000	14.626		

From Table 3 we see that all coefficients are significant. Constant is also included in this model specification. Regarding the last column, each Confidence Interval (CI) refers to the corresponding OR (Odds Ratio). In addition, according to the Hosmer and Lemeshow test, the null i.e. the high explanatory power of the model, should be accepted ( $X^2=12.952$ ,  $df = 8$ ,  $p\text{-value} = 0.114$ ). The results reveal that compared to the other categories, women ( $p<0.05$ ), the less educated ( $p<0.01$ ), the permanent ( $p<0.01$ ) and the low-level employees ( $p<0.05$ ) experienced more stress. In column labeled Percent of change the increase of the perceived stress moving from the one category to the next is presented. In this sense we observe that in terms of the perceived stress in relation to gender it was found that women experienced higher levels of increased stress (about 39%) compared to males.

## 5. Discussion

This study aims to investigate the effect of the unplanned organizational changes and imposed reforms in Greece, as a result of the economic crisis, on the perceived stress levels of the public servants working in different sectors, in association to demographic, working and socio-economic factors. The results revealed that women, the less educated, and the permanent employees experienced more stress when higher-level employees were found to have decreased stress levels.

In terms of the perceived stress in relation to gender one can find in the existing literature that women are more stressed than men. Thus, organizational changes were observed in women to be associated with psychological symptoms (Ferrie et al., 1995), increased rates of distress (Østhus, 2012) and prescribed anxiolytics (Kivimäki et al., 2007). Besides, McHugh (1997) reported higher levels on anxiety in women due to the imposed organizational changes and reforms in a public organization. According to Grau-Grau (2013) and under the economic crisis in Spain, both sexes presented increased level of stress and women were more likely to experience higher levels while Novo et al. (2001) reported that during the recession, females were exposed to somatic and psychological illnesses. In the context of downsizings, Feldman (1995) suggested that women were more vulnerable in relation to men, as it is harder to find new job and thus they remain unemployed for longer periods. Due to the economic crisis, Greece is one of the countries which has been mostly affected in terms of a high unemployment rate regarding women, reaching 27.5% (Hellenic Statistical Authority, 2017). Therefore, the working women are considered being lucky since they can seriously contribute to the family budget, considering the imposed high tax burden, the increased cost of living and the existent mortgage repayment difficulties.

In our study, it was found that the educational background reduces the stress levels of employees, in the sense that those having a higher level of education experience less stress. This seems logical because the aim of the newly enacted reforms is to create a public sector with highly educated employees to ensure greater competence and efficiency. In the context of the organizational changes, it was indicated that under the downsizing practices, the less educated employees are more vulnerable as it is possible to lose their jobs (Feldman, 1995). Cheng et al. (2005) found a positive association between lower education and perceived job insecurity due to the threat of job loss, resulting to a significant source of stress and leading to unfavorable psychosocial work conditions and poor health. Additionally, Grau-Grau (2013) indicated that employees with lower levels of education are more likely to perceive higher levels of stress due to the economic crisis. Regarding Greece, Zavras et al. (2012) explored the consequences of the economic crisis in relation to socio-economic factors and revealed a strong positive association between better self-rated health and high education. Additionally, education is proposed by Nella et al. (2015) as a crucial factor which can decrease public servants' job insecurity. Thus, all the above ensure that highly educated employees have a better feeling of security regarding their job, realizing decreased levels of stress.

Regarding the type of employment, the results seem quite reasonable since the psychological cost related to the expectation of a permanent employee for a possible job loss is much greater than that of an employee belonging to the other two categories as security is not included in their psychological contract (Shore and Tetrick, 1994). In literature it has been reported that in permanent employees a high level of employment security is observed (Virtanen et al., 2002) and changes in employment status, from fixed to permanent, are associated with higher job satisfaction and security (Virtanen et al., 2003). Additionally, permanent employees in public sector feel secure and expect to work under a safe work environment regarding layoffs (Vahtera and Pentti, 1999), as it was observed in Greece many years ago. Besides, the public sector was forced to be reduced due to the financial crisis as to decrease the operating costs, having an effect on the workload of the remaining employees. Workload and reductions in public sector have already been suggested by McHugh (1997) to be matters of high employees' preoccupation regarding their future on work and threat of job loss. Besides, workload was also indicated to be a source of stress during public sector management changes (Burchielli, 2006). Another factor influencing permanent public servants stress can be explained by the imposed salary cuts. Although the wages cut-down (which in many cases reached about 30% of the compensation during the last 5 years) has been found to have a strong association with anxiety (Ünal-Karagüven, 2009), on the other hand they can be also associated with the relief they experience, since the retention on the work in many cases can be the main source to cover the basic family needs, without having to face the bad consequences of unemployment. This can also explain why the increased stress of the public servants was not found to have a close relation with the variable Salary ( $p = .939$ , see Table 2).

Moreover, the high rate of unemployment increases the possibility to stay out of the work force given that in 2017 it reached the 23.2% (Hellenic Statistical Authority, 2017). In this sense, job insecurity, personnel reduction, workload, wages cut-down and high level of unemployment may explain the increased stress levels of the permanent public servers. Regarding the working status we observe that head officers experience decreased stress in relation to plain employees. Rafferty and Griffin (2006b) reported that managers are more likely to be frequently engaged in strategic planning and procedures regarding work changes, and are therefore better informed about upcoming changes. Thus, managers have the advantage of directly understanding the impact of such a change in their lives, and can successfully cope with it, whereas low-level employees cannot. The significance of the managers' characteristics was pointed out in many research works in order to make the change efforts more successful as in most cases such interventions do not succeed. In this regard, Wanberg and Banas (2000) suggested that managers are expected to have a more positive attitude to contribute to organizational changes since they have more access to information and greater opportunity to play an active role in decision making regarding the changes (see also St. Amour, 2001). All these are leading to change readiness, which already has been associated with higher levels of psychological wellbeing and job satisfaction (Terry and Jimmieson, 2003). Also received adequate information and willingness to change were showed to be positively related to managerial positions when adapting changes (Van den Heuvel et al., 2013). Thus, due to the fact that employees in high administrative positions have the required experience to respond to the new reforms properly and also given that they are directly informed about all the planned and imminent changes, they are less stressed compared to others.

## **6. Conclusions**

According to the findings of this study, the perceived stress can be mainly explained by the observed job insecurity derived from a no longer safe job environment, enactment of new policy relations, personnel reductions, workload, demand for highly educated employees, decrease of wages, high levels of unemployment, expensive standard of living and high taxation, resulting to impotence about covering everyday expenses and to mortgage repayment difficulties. Employees having the necessary personal characteristics, an active role in decisions related to reforms and more access on information about the imposed changes, were less affected. Many researchers have already documented how to promote active adjustment to change through interventions, using specific methods and techniques for achieving the anticipated results, given that changes generate to organizations' human resources fear and threat regarding their future at work, leading to stress and anxiety (Grzybowska, 2007; Hernandez and Scotti, 2007). In the case of unplanned changes due to the economic crisis, we observe that mostly exogenous factors are those that increase the stress of the employees, since the latter ones cannot manage and administer them and it is not easy to deal with. Additionally, more changes will be released in the future due to the unfortunate financial situation in Greece, adding pressures to the adverse impacts of the unfavorable consequences of the economic crisis.

To our knowledge, no other systematic empirical research has been traced regarding the stress experienced by public servants working in different sectors, in relation to demographic, working and socio-economic factors due to public sector reforms and organizational changes as a result of the economic recession. The outcomes of this study are of value to policy makers and occupational health professionals and should be taken into consideration, as it has been widely recognized that working stress causes severe psychological and health-related diseases and has many adverse impacts on the efficiency and the effectiveness of the organizations. Additionally, the results can be considered as an important source to improve management practices and to avoid unneeded stressful procedures. One limitation of this cross-sectional study is that the sample comes from a certain part of Greece. For more reliable and robust results a larger and more representative sample, randomly selected from various public sectors all over Greece should be considered. Besides, the research was based on the perceived stress of the employees indicating their self-reported evaluations. More quantitative and qualitative future researches should explore the reasons of the indicated stress, as to describe its origin and propose mediators and buffers, since different public sectors have their individualities and the implemented changes can affect their employees in different ways and for different reasons. Additionally, future studies should also focus on the implications of the imposed new reforms that are required to reduce the labor cost and, at the same time, to increase the work efficiency. In this sense, the cost benefits of the imposed changes should be examined given that long-term stress can be detrimental for the employees' life and the operation of the public organizations.

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