

THE MEASUREMENT OF RISK AND PERFORMANCE IN PUBLIC ORGANIZATIONS

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Abstract

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The basic idea of this article is to measure the risk and performance of public organizations, making use of a multi-factor model. Specifically, the purpose of this thesis theoretically and practically refers to the evaluation of the efficiency of the selected model in relation to the potential risks that public organizations are called upon to take, and also regarding the evaluation of their performance today and in the future. The model was measured at the level of efficiency as to whether it can be used in state organizations for the assessment of economic, operational (current and future) risks and the generic satisfaction of the administration, the generalized self-efficacy of the administration and the performance of the organization. The findings that emerged through the research field showed that the selected tool was implemented through six (6) scales: the economic risk, consisting of 15 elements, the operational risk measurement scale, the generic satisfaction of the administration which consisted from ten items, the generalized self-efficacy of the administration which consisted from six items and the performance of the organization which consisted from six items. The research carried out was quantitative for the final sample of 60 individuals, while the final analysis was performed with the SPSS program. The results showed the relationship of the selected model with the management of the risk on the administrative and financial level, as well as the improvement of the performance of the public organizations.

Keywords: Economic Risk, Operational Risk, Performance, Administration Satisfaction, Efficacy, Public Sector Organizations

1. INTRODUCTION

The public sector is currently characterized as ineffective because of features such as permanence, service time-based promotions, without emphasizing on the efficiency and skills, while the poor functioning combined with dependency on each government increases the risk. As a result, public organizations are constantly at risk in every aspect of their everyday operation, but also in relation to their future course (Rogge et al., 2017).

Risks are inherent everywhere and always and their occurrence affects and disrupts the course of organizations. In particular, the modern Greek public administration, operating in a period of economic crisis has to identify, analyze, categorize, visualize and model the risks in order to best address them. Combining the poor functioning of the public administration, and in particular the

public services that express them, with the risk, makes their work difficult and makes it necessary to develop a predictive and management process to reduce the risk and increase the chances of satisfactory performance.

The most important reasons for applying measurement methods to Public Administration are related to the effort to create a smaller, more flexible and more efficient public sector. The ultimate goal is to improve economy and to increase efficiency and performance, factors that enhance the confidence of the citizens in public administration (Moullin, 2017; Walsh, 2017).

This article will focus on the awareness of the need but also on the emphasis and the focus and not on the elimination of the risks but on the systematic process by the Greek public sector to identify and manage these in order to develop the strategic capacity of the organizations that will contribute to the safeguarding of the integrity of

their most important functions and will enhance their performance.

Risk management is at the core of any organizational policy (Gander et al., 2011). It is the process of continuously approaching the risks inherent in their operation, while also striving to achieve a sustainable gain in every action and portfolio of activities (Kyriazoglou et al., 2007). In addition, risk management is inextricably linked to effectiveness. Insufficient or ineffective risk management jeopardizes the performance and results of any organization (Oestreich, Buytendijk and Hatch, 2011).

This article will first refer first to the review of the literature, and then to the Methodology, indicating the research objectives, the ways in which the research was conducted, the research tool and the sample of research were selected. Then the results will be reported and the final conclusions will be recorded. The main objective of the results is to demonstrate the dynamics of risk management by public organizations. This research is relevant to the field of study and will provide many and important conclusions that could be implemented in the public sector with success.

2. LITERATURE REVIEW

2.1. Identification of risk management

Risk management is nothing more than the process of finding, controlling and minimizing (if not completely eliminating) the consequences of some extraordinary incidents. It is essentially a decision-making process and, consequently, action (Hopkin, 2018). Once a risk is noticed, risk management initiates procedures to minimize its negative effects through various management techniques that vary depending on the scope (Manuj, & Mentzer, 2008; McNeil et al., 2015; Bessis & O'Kelly, 2015).

The core competencies required by human resources for risk management do not differ from the general competencies involved in the overall management context, ie design, organization, management and control. The difference here is that the focus of actions focuses on minimizing losses due to possible accidents of various forms (Bannerman, 2008; Drennan, McConnell & Stark, 2014).

Risks are an integral part of the everyday life of individuals, businesses and the wider society. The danger is considered to lie beyond human knowledge and will and is not subject to the control of man's power, thought or will. Human societies, however, are characterized by a continuous effort to gain control over the dangers and to find ways to deal with them (Harland et al., 2003). Risk management identifies the threats to businesses and uses a variety of methods such as avoidance, detention, transportation, compensation, damage control, insurance or internal restraint to handle those (Harland et al., 2005).

The great importance of risk management makes it an indispensable feature for policies in the public sector as it can make a significant contribution to the overall assessment of public organizations (Brown & Osborne, 2011; Chen & Bozeman, 2012). The inclusion of risk management in government policies allows for the avoidance of problems in the functioning of the public sector, the impact of which is felt by citizens. It works essentially in the context of safeguarding the public interest (Rouillard, 2004). Risk management in the

public sector and its organizations is important for yet another reason. Many public organizations, due to their weaknesses, outsource their basic functions and work to the private sector to reduce their costs but this increases the risks that exist (Pongsiri, 2002; Hodge & Greve, 2007; Farneti & Young, 2008). Thereafter, the choice of a proper risk management model is proposed.

Risk management in the public sector and its organizations is important for yet another reason. Many public bodies, due to their weaknesses, outsource their basic functions and work to the private sector to reduce their costs but this increases the risks that exist (Walker et al., 2008; Harland et al., 2005; Mulgan & Albury, 2003). Clearly, public organizations can not only focus on risk management and it is almost certain that they cannot all risks be avoided. Risk management, however, may work towards the protection framework to a certain extent and in addition lead to the development and development of techniques and instruments that significantly reduce risks (Kimbrough & Compton, 2009; Eleftheriadis, 2011).

Understanding the importance of risk management has led to the development of many different methods and techniques to deal with, but mainly to identify them. But the main focus is the economic functioning of market rules. This makes them one-dimensional and therefore not fully effective (MJP, 1996; Jorion, 2007; Marshal and Siegel, 1997; Artzner et al., 1999; Altman and Saunders, 1998; Bangia et al., 2001).

The deficiencies they present do not make them suitable for the evaluation of public organizations in Greece. Public organizations also include a social dimension, which means that their economic evaluation is not enough. Also, public organizations have different characteristics depending on their purpose and therefore a model may not be suitable for all. However, there are techniques that can be applied in many cases to collect data and have been shown to be effective such as the use of quantitative questionnaires (Akerboom & Maes, 2007; Ciavarelli et al., 2001).

2.2. Risk management and public administration performance

Public administration performance refers to the final outcome of the organization work and is considered to be of the utmost importance for the viability of the one (Salanova et al., 2005). It is natural that since the risks are located in the environment of the organization they are interrelated, affected by one another or one risk creates another in a different field (Raczkowski & Macmillan, 2017). Their importance to organizations has been highlighted by distinguished scientists whose efforts have focused on identifying the different types of financial risks and developed scientific tools and methodologies for their assessment and management. The constant and rapid technological developments of the recent decades, the liberalization and deregulation of the financial markets and the increasing competition between them have led to the intensification of the use of complex methodologies (Harry, 2017). However, it does not take much time to solve mathematical models, from the broader field of business research to public administration and thus to the establishment of public engineering. Within the context of the public engineering view, risk

management is the key factor, which is one of the most important functions for each public organization in the decade. Of course, risk management is not just about financial issues. There are researchers who also report the risks stemming from the natural environment (Henry, 2017). Addressing the natural environment by a public organization, its views on ecological concerns or the reactions it should have against some natural disasters, harmful to the public organization, such as a fire, are conditions that should be included in the action plan of every public enterprise (Boin and Lodge, 2016).

Such risks are among the operational ones. The majority of the risk approach was based on the use of possible theoretical figures for risk measurement (mean value, dispersion) and the application of optimization techniques to make the right decisions (Boin, Stern & Sundelius, 2016). Over the last two decades this consideration of the risk management issue has been strongly criticized by several researchers, who have highlighted the multidimensional nature of the risk, the multiple factors affecting it, and the inability of possible theoretical figures to reflect the real sense of risk as perceived by each recipient of the decision (Glendon, Clark & McKenna, 2016). Effective risk management helps the organization to do the right thing on the one hand and, on the other, to reduce employees' fears by increasing the levels of satisfaction. Risk management is directly intertwined with the performance of people and, in general, of the public organization as a whole. Based on this description, employee satisfaction as it occurs in public organizations will be studied in the theoretical part of the article, and more specifically in the next section (Durant, 2017).

2.3. Employee job satisfaction

Snell (2015) tries to define the concept of job satisfaction through practices and policies pursued by the organization on the one hand, and on the other, through employees' perceptions of whether and to what extent human needs such as safety, satisfaction and the need for growth in the workplace are met. Nowadays there is and increasing interest about quality in the working life which is a concept that is a prerequisite for quality in the personal life and which is not based on a particular theory nor does it require a specific technique for implementation. Job satisfaction is related to the working climate as a whole. Job satisfaction and self-efficacy are two factors that motivate employees to work with enthusiasm and efficiency in the job assigned to them (Coggburn et al., 2017).

It should be stressed that there is a close relationship between the motivation and performance parameters. A change in one of these two has an effect on the rest. If a company can predict the performance of an employee, this may also affect its demonstration. Based on this, it is possible to make decisions about how to choose the right people for the right jobs, what training they should have, and with what planning and how to coordinate its efforts to increase satisfaction and improve the quality of the produced work. This requires managers to focus on employee satisfaction and achievement of the organization's goals (Voon et al., 2011).

In practice, however, managers need to be disposed to share the power they hold in some way,

and intensive training should take place for both managers and employees and, of course, patience. Employees, in a nutshell, need to gain insight into concepts such as cost, quality, profit, damage, and managers should identify with their new role, become mentors, assistants and gather useful information (Lumley et al., 2011).

The philosophy of job satisfaction must aim at both problem solving and collaboration between management and employees. Any action for job satisfaction should not be one-sided commands by the senior management. Sheel et al (2012) refer to some features that affect the satisfaction at work. They emphasize the difference between traditional management according to which satisfaction in the working life was based only on non-essential features such as salary and other tangible elements such as safety and hygiene in the workplace and the modern perception that combines job satisfaction with human relationships (Sheel et al., 2012). This new concept emphasizes that all of this is necessary, but there are also some essential factors such as the level of activities, the degree of autonomy and the challenges given to workers (Parboteeah et al., 2013).

In order to achieve job satisfaction, a strategy needs to be pursued that creates job opportunities for workers for their personal and professional development. This strategy consists of measures encompassing work enrichment and training programs to upgrade professional skills as well as knowledge. Closely linked to the above is the ability to produce which greatly affects the workers' decisions to remain or to give up their job (Tyler, 2012).

Bandura (1997) expressed the concept of self-efficacy as "the personal beliefs that one has regarding his or her ability to organize and execute specific action plans in order to achieve predetermined performance levels" (p.3). When referring to public services, self-efficacy can be defined as "the personal beliefs of employees about their ability to influence the operation of their service". In general, there is a perception that self-efficacy can be developed by a significant number of sources. For example, Bandura (1997) believes that these sources are:

1. Personal experiences (or mastery experiences). Experiences of success or failure that stabilize or break down the sense of efficacy of the individual.
2. Standards or Representative Experiences (or Vicarious Experiences). Observing the behavior of others and the consequences they imply enriches the experience of the individuals and indirectly influences their behavior.
3. Social persuasions. The efficacy of the individual draws on both the persuasion of himself and others. The acceptance of the individual by a senior or colleague in the field is included in this category.
4. Physiological and emotional states. Self-efficacy ultimately depends on the physical and emotional state. This category includes factors such as physical achievements, health, and stress management.

There are many research findings that positively link job satisfaction with employee self-efficacy (Klassen, & Chiu, 2010; Libano et al., 2012; McNatt, & Jubge, 2008; Skaalvik, & Skaalvik, 2010). Interesting is the research finding of Libano et al. (2012) the research purpose of whom was to examine, inter alia, the kind of connection between

job satisfaction and self - efficacy of workers as a derivative of Workaholism. The survey was carried out in 386 employees of the administrative staff of a Spanish University and the results of the survey confirmed the initial hypothesis about the positive correlation between job satisfaction and teacher self - efficacy. This result may be due to the fact that people with a high sense of self - efficacy use more resources in their work, have fewer demands and experience greater commitment than people with lower self - efficacy.

3. RESEARCH METHODOLOGY

3.1. Analysis research scales in order to measure economic, operational risk and job satisfaction

In the present study, the quantitative method has been selected as the most appropriate method and the reason is that it serves more properly to derive the correct result for this research.

The quantitative research method was selected for two reasons: First, it is characterized by an excellent balance between cost, validity and efficiency in data collection. Second, experiments and observation have significant limitations. In the field of management, the scientific questionnaire clearly dominates both in terms of frequency and effectiveness. In this context and according to the literature on the subject under examination, the most appropriate research methodology for risk measurement and management in the Greek public sector is the quantitative research method for the following reasons:

1. a large database that is accessible
2. the possibility of standardizing the data
3. the suitability of the data for statistical processing
4. objectivity and generalization of conclusions
5. possibility for further analysis by other researchers

More specifically, this quantitative research will use the measuring instrument that will best serve to properly draw conclusions in the most credible way with regard to organizations. Probably, it is necessary to calculate the operational risks and how great they are within the organizations being studied, as well as the performance and the satisfaction of the managerial employees.

At the same time, this study explores the validity from the six scales and then the validity of forecasts regarding the scales of financial and operational risks, as well as the job satisfaction and the administrative efficiency of the management through the SPSS statistical package. Also, the reliability of the scales was calculated using Cronbach's alpha. This study aimed to present the research tool, which in this case is the questionnaire and which can be used by the Greek government services.

3.2. Questionnaire scale analysis

Operational risk is the risk faced by a company during the production process and has to do with the human factor.

The operational risk is not related to capital, credit, or systemic risk. It encompasses the difficulties that exist in internal processes, labor relations, business systems, and generally the dysfunctions related to the human factor.

Companies with lower human capital requirements will also have a lower operational risk.

The concept of the "business risk" is a consequence of the economic approach to the wider term "risk" as developed above. However, business risk, as a more specific type of risk, refers to the likelihood of loss of profitability and productivity of a company due to mistaken choices and management decisions that result in losses. Although the risk, in this case, is related to the unfavorable outcome of a business activity, it is interesting to note that it does not always appear as a catastrophic event. Much more, the risks tend to occur usually in two ways: either as opportunities, that is to say, as constructive events, capable of contributing to the achievement of predetermined goals or as threats, that is, as catastrophic events, that may prevent the achievement of the goals.

Of course, it is wrong to consider that the operational risk refers only to adverse events relating to the injurious management by the administration. Rather, the operational risk includes missed opportunities because of the actions that were not made by the administration and which could maximize the company's profit. For a better understanding of the concept of risk, it is particularly important to understand another concept, the "exposure to risk", which relates to the dynamics of potential events and the possible magnitude of their impact. It is worth stressing that all risk management processes are designed to better control the exposure to risk and to maintain it at an acceptable level by identifying the factors that can be controlled (Akerboom & Maes, 2007; Ciavarelli et al., 2001). More specifically, the 17 variables to be evaluated through the questionnaires are as follows (see Appendix A).

Financial risk: In order to calculate the financial risk, the questionnaire uses a scale based on the AGA (Association of Accountants in the United States of America). Due to the fact that this scale is applied to the US public sector, it is necessary to adapt it to the Greek public sector. The scoring method results by the following questions (see Appendix B).

Performance Index. The final version of the performance score is comprised of 56 queries covering eight latent dimensions. Grades move through a 5-point scale and the dimensions, with a brief description, are shown in Appendix C.

The Generic Job Satisfaction Scale. This scale refers to all employees. It measures job satisfaction by looking at factors such as working hours, boredom, control over work, risk and security. In addition to these factors, general feelings, pre-social problems and the health of workers are also explored. Questions are answered on a 5-point Likert scale from "Totally agree" to "Totally disagree".

Generalized Self-Efficacy Scale. The scale contains 10 statements from a 4-point scale. It is designed to assess the self-efficacy in dealing with a variety of demanding requirements in life. The scale expressly refers to the personal mediation that is the confidence that the actions of the person itself are responsible for the success. The score has reached 40, showing great efficiency.

3.3. Aims

The aim of this research refers to the evaluation of the efficiency of the selected model in relation to

the potential risks that public organizations are called upon to take, and also regarding the evaluation of their performance today and in the future

3.4. Methods

The sample of the present study is 73 questionnaires, which were distributed to managers in Greek state organizations. From the selected sample 60 answered the questions differently, with a response rate of 82.19%. Forty-six of the respondents were supervisors, 9 were directors and 11 other executives (Eleftheriadis & Vytas, 2017). In the present study, descriptive statistics were used mainly in the research sector. Descriptive statistics are presented in the five-point scale. Statistical data were used to test the validity of the financial risk. In order to study this, Kendall's tau-b coefficient was used (Field, 2005). In addition, regression analysis was used to predict the financial risk using

independent variables and to study the predictive power of the two scales (Eleftheriadis & Vytas, 2017).

4. RESULTS

According to Table 1, the average financial risk reached 3.91 (SD = 0.76), indicating that those who participated in the research said that the financial risk is in a moderate state. Not too low, nor too high. Also, the average of the existing operational risk reached 3.96 (SD = 0.77) and the future operational risk reached 4.30 (SD = 0.60). Also, the indicator showing the company's performance is calculated as an average, 3.25 (SD = .51) and general job satisfaction (M = 4.65, SD = .89) and generalized self-efficacy (M = 4.93, SD = 1.04). The management was also calculated as an average. The internal reliability of the scales was satisfactory since all values exceeded 0.7.

Table 1. Descriptive statistics

	Min	Max	M	SD	Cronbach's alpha index
Economical risk	1.80	5.40	3.91	.76	.825
Current operational risk	2.64	5.00	3.96	.77	.890
Future operational risk	3.06	5.29	4.30	.60	.887
Performance Index	2.20	4.20	3.25	.51	.825
The Generic Job Satisfaction Scale	2.70	6.40	4.65	.89	.865
Generalized Self Efficacy Scale	3.00	6.67	4.93	1.04	.907

Note: M: mean value, SD: standard deviation, Min: minimum value, Max: maximum value

Table 2. Correlation

Kendall's tau_b	Economical risk	Current operational risk	Future operational risk	Performance Index	The Generic Job Satisfaction Scale	Generalized Self Efficacy Scale
Economical risk	1	-.438**	-.279**	-.021	-.448**	-.221*
Current operational risk		1	.243*	.164	.194*	-.069
Future operational risk			1	-.247*	.359**	.186*
Performance Index				1	.082	.135
The Generic Job Satisfaction Scale					1	.480**
Generalized Self Efficacy Scale						1

Note:*. Correlation is significant at the 0.05 level (2-tailed), **. Correlation is significant at the 0.01 level (2-tailed).

According to the above, there was a negative correlation between the financial risk and the current risk (r = - .438, p = .000) (higher values relate to the lowest current operational risk) and the future operational risk (r = - .279, p = .004) (higher values reflect lower future operational risk), thus reducing the financial risk.

This means that the future operational risk is expressed as a low. There was also a negative correlation of the financial risk and the general

satisfaction scale (r = - .448, p = .000) and the generalized self-efficacy scale (r = - .221, p = .022).

In addition, there was a statistically significant positive correlation between the generalized self-efficacy scale and the general satisfaction scale (r = .480, p = .000). Finally, a statistically significant negative correlation was reported, while the financial risk diminishes the correlation between the future operational risk and the general satisfaction level (r = .359, p = .000).

Table 3. Regression analysis

	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
(Constant)					
Economical risk	3.414	.846		4.033	.000
Current operational risk	-.042	.100	-.061	-.419	.677
Future operational risk	.329	.093	.483	3.527	.001
The Generic Job Satisfaction Scale	-.306	.126	-.351	-2.427	.019
Generalized Self Efficacy Scale	-.205	.121	-.357	-1.692	.096
(Constant)	.197	.087	.402	2.271	.027

Table 3 shows the results of the multiple regression analysis that was performed. The model is statistically of great importance $F(5, 54) = 4.844$, $p = .001$, $R^2 = .310$. Of the 5 independent variables, the current operational risk has a predictive value ($B = .329$, $p = .001$), as well as the future operational risk ($B = -.306$, $p = .019$) and the generalized self-efficacy ($B = .197$, $p = .027$) had predictive value.

5. DISCUSSION

There was a positive correlation between the scale of self-efficacy and satisfaction. Besides the regression analysis, it was documented that the existing operational risk has a predictive value in the performance index of the organization (Eleftheriadis & Vytas, 2017). Operational risk is defined by the Basel Committee as “the risk of loss resulting from an inadequate or failed internal process, people and systems, or from external events”.

The results have shown that current and future scales, the financial scales and the scales of satisfaction are useful management tools. Risk management is a process that aims to measure or assess risks and is followed by the development of strategies to mitigate them (Rothstein, Huber and Gaskell, 2006). Integrated risk management guarantees that “all necessary steps and measures are taken to address the uncertainty of the future” (Eleftheriadis, 2011). In the future, it is advisable to study a larger sample to confirm more reliable results. Of course, from the above, it can be noted that the tool under study can be used in the Greek public sector with no difficulty and immediacy. This tool can help Greek public organizations to gain useful knowledge on risk level and planning actions. Also, the Greek state will have the support tools (Eleftheriadis & Vytas, 2017).

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6. CONCLUSIONS

The scale that included a measurement tool was

- a. the financial risk scale which measures 15 items were reported;

As the study of the international theoretical and research literature reveals, we can safely assume that risk measurement through the use of questionnaires is a well-documented practice and yields reliable results (Akerboom and Maes, 2006; Knechel, 2007; Ciavarelli et al., 2001). In particular, the above-mentioned researchers used quantitative questionnaires to measure perceived risk in various contexts. The results of these studies showed that the data collected demonstrated good reliability and validity. Therefore, it can be assumed that the closed-ended questionnaire can be a reliable tool to measure risk perceptions.

- b. the operational risk measurement scale at the present time and the future that contained 17 items'

The “perceived operational risk” scale is a tool that aims to help assess the risks of organizations. Risk measurement with the help of a questionnaire survey is a concept that has been successfully tested in the past (Akerboom and Maes, 2006; Ciavarelli et al., 2001).

- c. the company's performance index, which included 5 items;
- d. the overall scale that measures job satisfaction with 10 item;
- e. the self-efficacy scale with 6 items.

Concurrent analysis of validity has led to the conclusion that there was a negative correlation between the financial risk and the current and future operational risk. There was also a strong negative correlation with the financial risk and the general satisfaction scale and the generalized scale of self-efficacy.

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APPENDIX

Appendix A. Perceived operational Risk scale *Akerboom and Maes (2007); Modified (Eleftheriadis & Vyttas, 2017)*

1. Citizens served by the business.
2. The importance of services offered by the company for the public administration
3. The importance of business to the public.
4. Possible assignment of functions
5. The range of services of the organization.
6. The number of people working.
7. The adequacy of facilities
8. The debt of the organization to a third party
9. The adequacy of equipment
10. The availability of supplies
11. The adequacy of the organization's total income to cover costs
12. The amount of state funding.
13. The organization's goals
14. The quality of the members of the employees.
15. The speed of decision-making
16. Functional administrative adequacy.
17. Public opinion

Appendix B. Economic Scale. AGA (2007)
Modified (Eleftheriadis & Vytas, 2017)

1. The State's annual funding is sufficient to cover the operating costs of the organization
2. Costs exceed the budget.
3. Expenses exceed the permissible values.
4. The organization uses financing solutions for cash coverage.
5. Cash flow has problems.
6. Financial reports have changed.
7. The organization has achieved revenue streams that are needed to cover its costs.
8. The income of the organization is smaller than it should to cover costs and make a profit.
9. Debt to third parties increased.
10. Fixed assets declined.
11. The return on intangible assets decreased
12. Within one year, funds are reimbursed for the next one.
13. The borrowing of the organization has increased.
14. Funding is below tolerance levels.
15. The organization shall provide timely financial statements

Appendix C. Performance Index Scale
(Spangenberg & Theron, 2004)

1. Productive result: refers to quantitative findings, such as performance goals, and cost effectiveness
2. Basic people processes: it has to do with organizational efficiency criteria such as management conflicts, productivity issues, and performance rewards.
3. Working unit climate: It concerns the psychological environment of the working environment in terms of group issues and team commitments.
4. Pleasant workplace climate: Work satisfaction and leadership in issues, trust and acceptance.
5. Issues of adaptability: concerns the flexible movements of administrative systems. It concerns the ability of the unit to change appropriately and quickly.
6. Unit internal capacity: It concerns the dynamics of internal economic dynamics and labor quality Market share: concerns competition and customer satisfaction issues
7. Future development: concerns future performance and involves earnings and expansion of the unit.

Appendix D. Generic Job Satisfaction Scale
(Macdonald & MacIntyre, 1997)

1. I will feel secure about my job
2. I will feel like part of the team
3. I will work pleasantly in the company
4. I will be recognized in my job
5. The administration will be interested in me
6. I believe that the project will work positively on my health
7. I will receive payroll with satisfactory earnings
8. My knowledge is useful in my work
9. My supervisors are there for me when I need them
10. I feel good about my job

Appendix E. Generalized Self Efficacy Scale
(Schwarzer & Jerusalem, 1995)

1. I am able to solve the differences and the problems that are presented with effort and goodwill
2. If some people block my progression I am able to reach my goal
3. I can achieve and stick to the goals I have set at the beginning
4. I know that I can accomplish the difficulties that I will encounter
5. I know how to handle unpredictable situations
6. I am able to solve problems through intense effort and will
7. In difficult situations I can handle my emotions and keep my temper and logic
8. I am able to find solutions to problems
9. If I have a problem I can usually think of a solution
10. I am able to handle whatever problem is in my way