



A study on effect of individual creativity mediated by the time management on job performance of employees of Tehran water & Sewage Company, region 1

Peymaneh Nikzad

Received: 25.05.2015

Revised: 30.06.2015

Accepted: 10.07.2015

ABSTRACT

In the modern age, the most important goal of an organization is to achieve a high degree of efficiency and effectiveness. Thus, the objective of this study is to investigate the impact of Individual creativity on job performance with the mediation of time management in the water and wastewater Co. Tehran region 1. 202 sample employees were selected randomly representing the whole Population studied consisting of all of the employees of WWC, Tehran region 1. Data were collected using self-made questionnaire of the researcher. Validity of the questionnaire was approved by professors and experts of the Management department and Cronbach's Alpha coefficient of reliability of the research was estimated 0.924. Descriptive statistics and inferential statistics and structural equation method are used to analyse data.

Findings suggest that there is a positive and significant relationship between individual creativity and job performance of employees with mediatory of Time Management, while, individual creativity can predict job performance with a greater influence (a larger β) relative to Time Management.

Keywords: individual creativity, Time management, Job performance

Introduction:

The fast changes and developing world competition of Today requires a steady and growing recognition and knowledge of the creativity and time management. Creativity is considered as the key to individual success and success of organization as well. Creativity means producing new useful ideas, which is a starting point for innovation and entrepreneurship (Amabile, 1996; Zampetakis and Mostakis, 2006). Since the progress and development of any organization depends on the creation of new ideas and implementing these ideas, organizations and institutions are following in an unprecedented way creativity and innovation in order to survive in today's changing turbulent world. (Alvani, 1996). Condition for organizational success in the competitive world of today, is the ability to implement new ideas in the organizations and this is possible by the creative staff. (Alvani, S.M., 2009). To perform their duties, employees need three skills i.e. perceptual (cognitive) skill, human (communicative) skill, and technical (Executive) skill. Depending on the type of services provided by organizations, it seems that commitment to the obligations for customers, according to the ability to manage and deal with the limitations and time

Author's Address

Azad university, Tehran North Branch

pressure is the main factor of efficiency for organizations today. So that in modern time, high efficiency and effectiveness is considered the most important goal of organizations. Today, organizations are not able to grow and progress just by making products and services of high quality, but it also requires them to do the work in less time or more quickly. The faster and in a shorter time an organization makes innovations in creating new products and services than other competing companies, the ability for that organization to compete with them and conquer the market increases. Therefore, environmental factors influencing organizational efficiency as well as rapid and profound changes in the demands and needs of customers in one hand, and tight competition between organizations on the other hand, has led successful organizations to pay more attention to time management techniques than ever. (Zampetakis, 2008)

In fact, how to use time can make an important distinction between successful people and unsuccessful people. Time management includes goal-setting, priority of goals, and the use of available resources to achieve short-term or long-term goals. In this regard, Kelly (2004) refers to the employees' ability to manage time as the main factor of success, which depends on how to control



and use the available time and on planning tasks to avoid wasting time by managers and staff.

Malek Ara (2009) also introduced time management as a core component of science of management, regarded lack of time required to perform tasks and duties as the main reason for job stress of employees and stated that effective time management means effective use of resources and a way to achieve desired goals. During a study titled Effective Time Management in Organizations, Lucas (2008) expresses the view that the aim of time management is to devote more time to thinking about duties, not to do more tasks in less time.

One of the important issues raised in the discussion of time management, is using and managing time so that there will not be any waste of time. On the other hand, any organization whether large or small, should have a group of qualified and competent forces in order to meet its goals. In any organization, depending on the type of services it offers, human resources is the key to increasing productivity and in most Developed countries creative human resources are regarded as the greatest asset. In fact, the success and effectiveness of the organizations in a major degree depend on skilled, efficient and creative manpower.

Easeneck (1995) regards creativity as a potential of individuals which depends on creating creative ideas and behaviors. The results of research conducted in efficient and successful organizations confirm that paying attention to useful and fresh ideas of employees and welcoming and encouraging the ideas on the one hand and establishing a creative environment in organization on the other hand is one of the key approaches increasingly and dramatically used in recent years in International organizations to survive in marketplace and to compete with other organizations. zoo (2001) knows creativity as a new method and procedure of doing things that has two characteristics : it is new and potentially useful and practical that increases individual and organizational efficiency and productivity. Many previous studies in Identifying obstacles , realize criticism and ultimately lack of allocation of adequate and appropriate time in organizations as the main reasons for failure to provide

organizations new ideas by staff. Zampetakis (2010) reported, in study of the relationship between time management with individual creativity, that offering creative ideas is closely associated with the culture and organizational atmosphere. While, Ounna (2011) believes that people are born with limited capabilities for creativity, nurtured through proper training and education. Out of studies and research, barriers to people' creativity and innovation in organizations can be divided into two types: Individual barriers and organizational barriers.

Individual barriers are related to personal characteristics of the individual. The main obstacles to individual creativity and innovation may be lack of confidence, conservatism, lack of commitment, intellectual dependence, tend to homogeneity and conformity, avoiding from any ambiguity, lack of necessary mental complexity to study issues, Lack of mental focus and shyness.

Organizational barriers refers to the the unsatisfactory and inappropriate internal environment of an organization. Organizational barriers to creativity and innovation may be mechanical organizational structure, poor organizational culture, autocratic leadership style of an organization, undesirable and poor training and rewarding systems and finally, the absence of necessary facilities in order to encourage and support creativity and innovation.

In fact, the ability to properly manage time by top management and to motivate employees to use their maximum capacity and abilities are two factors that will ensure the global competitiveness of the enterprises. Employees can reinforce the time management technique to prevent interference of tasks and duties, thus the stress caused by lack of access to long-term goals will be lost. The results of previous research in the field of creativity have showed that the time factor can be a major source of creativity.

Time management implies using time effectively for efficiency and productivity and reducing stress. "Time planning" is the common specification between different perceptions of time management, which refers to decisions related to doing tasks and duties, prioritizing tasks and effective management of possible confusions(Clasense, Venard, Routh and Row , 2004)



A study on effect of individual creativity

Using time management behaviors may seem as differences between individuals' skills for planning behavior such as short-term planning via willingness toward long-term planning, short-term planning refers to time management activities within a daily or weekly time frame. Willingness for long-term planning refers to having long-term goals and organized work habits. Effective use of time management results in three types of behavior: 1) setting objectives and priorities 2) time management mechanism 3) the desire to organize. Macan (1994) expresses that understanding time control reflects an area in which someone believes that he can affect the way time is spent and is positively related to time management behaviors. (Clasens et al., 2004) Prioritizing tasks is the first step in this regard and employees and managers should classify tasks and duties based on importance of duties. Classification of tasks must be performed as an annual plan. Furthermore, scheduling daily tasks, confidence in the long-term consequences of Planning, and attention to the preferences and demands of top management are the most important actions in this area. Lynne (1998), refers to "time pressure" as the common problem between employees and believes that having creative man power will solve the problem. He has reported on the results of his investigations that enjoying "creativity thinking skills" and motivation and expertise in implementation of duties and tasks are inborn characteristics of creative people. Nolla and Samsodin (2012) Found that organizations which are charged with performing "time management" during completion of an event will show a better performance. Most employees

of these organizations believed that through time management, they will be able to manage all duties in times and occasions of heavy workloads and have better performances. Nouri and Colleagues (2012) did a research on "The relation of individual creativity with time management". The result of their research show that effective time management and using correct communicative skills on one hand, and using expertise, creative and efficient men powers on the other hand, are the major factors for success of the organizations.

2. Research goals

Overall goal of the research is to study the influence of individual creativity on the job performance, mediated by time management. Achieving this goal requires achieving specific objectives:

- 1- To study the effect of individual creativity on time management.
- 2- To study the effect of individual creativity on job performance.
- 3- To study the effect of time management on job performance.

3. Hypothesis and conceptual framework of the research:

The man hypothesis: Individual creativity will effect on the job performance with mediatory of time management

- 1- Individual creativity influence time management.
- 2- Individual creativity can influence job performance.
- 3- Time managing can influence job performance.

Form of research conceptual framework

Individual creativity	Time management	Job performance of employees
Creative personality Creativity through self evolution Total creativity	Time management attitude Time management behavior	Discipline in the work Severity in the work Experience Responsibility Creativity



4. Methodology of Research

This research is regarded as quantitative in terms of nature and as cross-sectional in terms of descriptive- survey method, and as an applied research in terms of goal.

Variables are independent, dependent and mediator.

A – Independent variable: is individual creativity with aspects of creative personality, and creativity through self-evaluation.

B – Dependent variable: job performance was measured by the aspects of work discipline, severity in the work, experience and responsibility.

C – Mediator variable was measured by time management behavior, time management perception and willingness to disorganization.

Population of the research consists of employees of Tehran water and sewage company, Rejoin one, with a statistical sample of n=202 people who have been randomly selected.

Research tools to collect data is a questionnaire, according to likert scale :(1=Strongly disagree, 2=Disagree, 3=Does not matter, 4=Agree, 5= Strongly agree). After completing the

questionnaires, data analysis was performed using PLS software. Frequency, Percentage, Cumulative percentage, Mean and standard deviation were used to describe data. Validity of questionnaire was measured using structural validity and formal validity and its reliability was calculated using Cronbach's alpha test. Cronbach's alpha coefficient of this research was obtained 0.924.

5. Findings

5.1. Individual characteristics of the study population

According to questionnaires, about 84% of the respondents under study were aged between 26-45. 10 percent were older than 46 and 6 percent younger than 25 years old. 43 percent were female and 57 percent were male.

5.2. Studying research diagrams and results analysis

Load Factors were used to analyse the structure of the questionnaires and discover the constituent elements of each structure. All indicators have load factors greater than 0.5. So none of the indicators are excluded from the model.

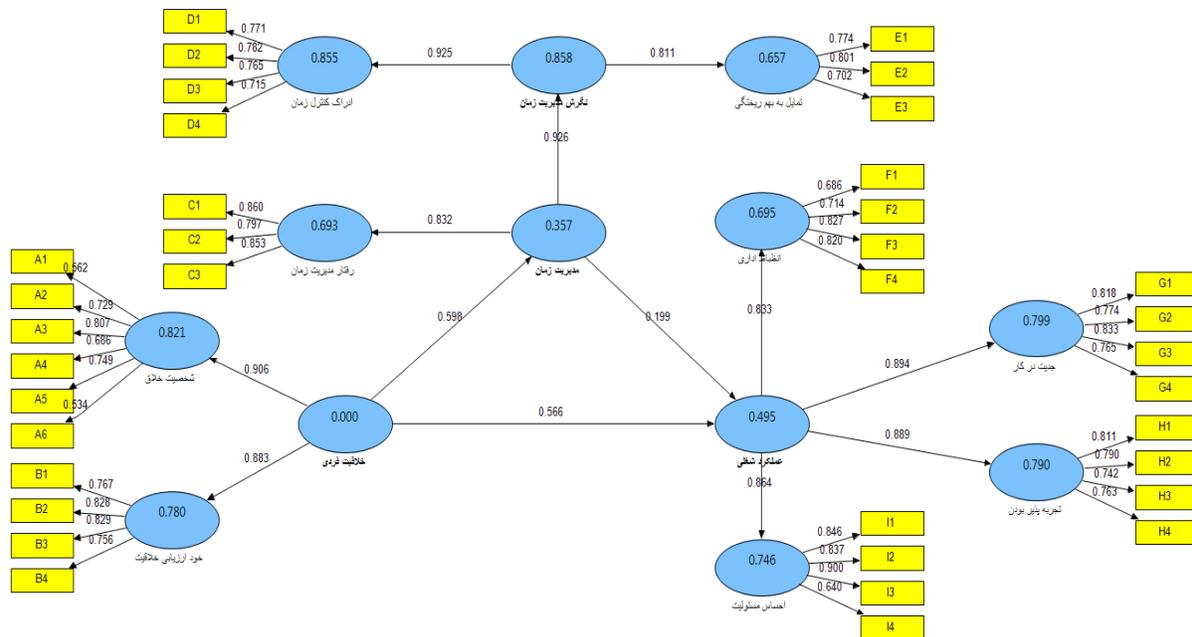


Diagram No 1 A model for estimating standard coefficients

Figure1 shows Confirmatory factor analysis and structural equations model in standard mode of coefficients estimation. Individual creativity variable is (independent), time management is (mediator) and job performance is (dependent). Hidden variables are (oval) and obvious variables are (rectangle).



A study on effect of individual creativity

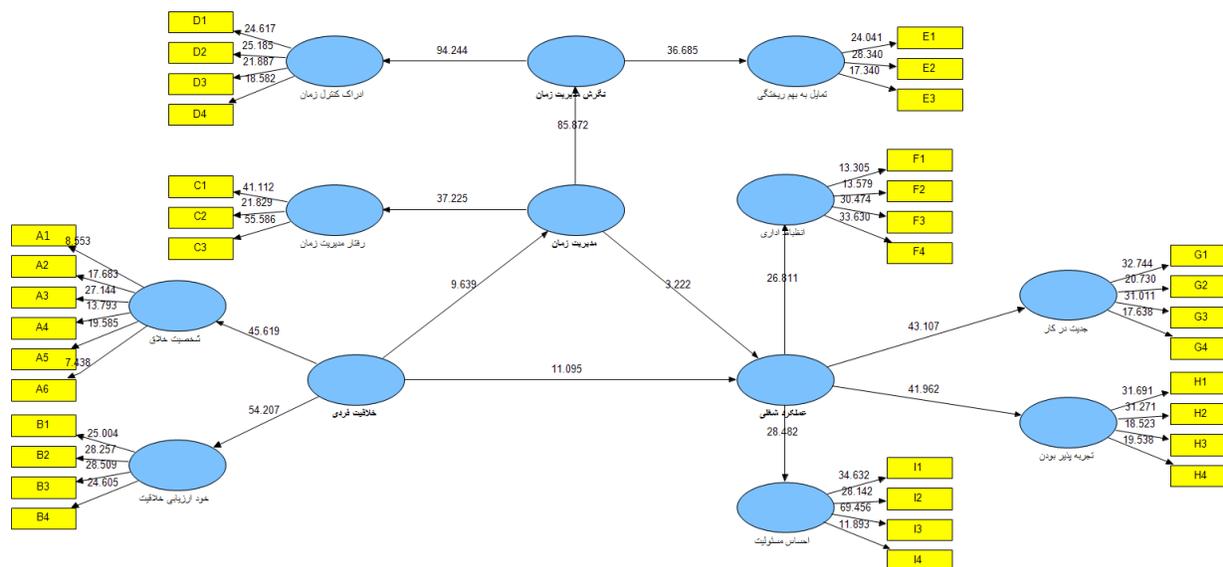


Diagram 2 Model for significant absolute value(T. Value)

Figure 2 shows confirmatory factor analysis and structural equations model in a state of absolute values of coefficients significance (t-value). This mode, in fact, tests all measuring equations and all construct equations through t statistics.

According to this model, direction coefficient is significant at a confidence level of 95%, if the statistical value of t is greater than 1.96.

5.3.Calculating the convergent validity and reliability and fitness of the model

Table of parameter of validity, reliability and fitness of model

Hidden variables	AVE	CR	R	Cronbach,s alpha	\sqrt{AVE}	\sqrt{R}	GOF
Creative personality	0.569	0.839	0.821	0.766	0.822	0.844	0.694
Self evaluation of creativity	0.633	0.873	0.78	0.807			
Time management behavior	0.701	0.875	0.693	0.788			
Comprehension of time control	0.576	0.844	0.855	0.755			
Willingness to disorganization	0.578	0.804	0.657	0.633			
Administrative discipline	0.584	0.848	0.695	0.761			
Hard working	0.637	0.875	0.799	0.809			
Experience	0.604	0.859	0.79	0.781			
Responsibility	0.659	0.884	0.746	0.822			
Individual creativity	0.828	0.88	0	0.848			
Time management	0.712	0.872	0.357	0.837			
Time management attitude	0.842	0.846	0.858	0.787			
Job performance	0.87	0.933	0.495	0.923			

The referred table shows parameters of variables. . It has been shown that each pointer Convergent validity and reliability for all research only measures its own structure and the



combinations of them are in a way that all structures are fully separated. It was recognized, using parameter of average variance extracted, that all studied structures have extracted average variance greater than 0.5. Composite reliability parameter (CR) and Cronbach,s alpha are used for calculating reliability of questionnaires and the

confirmation of reliability requires these parameters to be higher than 0.6.

GOf values higher than 0.4 indicates fitness of the model. Fitness parameter is calculated 0.694. In other words, data of this research are well-fitted to factor structure and theoretical framework of research, which shows that the questions are in direction with theoretical framework.

5.4.Calculation of divergent validity

Correlation coefficients and divergent validity parameter

Hidden variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	$\sqrt{\text{AVE}}$
1-creative personality	1									0.754
2- self evaluation of creativity	0.601	1								0.796
3- Time management	0.339	0.513	1							0.837
4- comprehension of time control	0.482	0.506	0.592	1						0.759
5- willingness to disorganization	0.262	0.47	0.353	0.526	1					0.760
6- Administrative discipline	0.584	0.453	0.405	0.486	0.238	1				0.764
7- Hard working	0.61	0,501	0.347	0.451	0.162	0.76	1			0.798
8- Experience centre	0.591	0,51	0.389	0.479	0.19	0.617	0.694	1		0.777
9- Responsibility	0.514	0.472	0.397	0.493	0.154	0.557	0.653	0.776	1	0.812

The last column of the table shows square root of average explained variance (AVE). The confirmation of divergent validity requires the value of $\sqrt{\text{AVE}}$ to be more than all the variable correlation coefficients associated with the other variables.

Discussion and conclusion:

A - Individual Characteristics of studied population. According to questioner, about 84% of research respondents were in age range of 26-45 years old. 10% were over 46 and %6 lower than 25 years old. 43% were women and 57% men.



B – Considering the findings, to achieve overall goal of the research, each specific goal of the research will be discussed respectively in the table below.

Table for results of structural Equations

Hypothesis	Dependent variable	β	T	Defining coefficient	Hypothesis status	Effect direction
Main	Individual creativity- Time management- Job performance	0.68 5	11.963	0.469	Confirmed	direct
1	Individual creativity – Time management	0.59 8	9.639	0.357	Confirmed	direct
2	Individual creativity – Job performance	0.56 6	11.095	0.495	Confirmed	direct
3	Time management- Job performance	0.19 9	3.222		Confirmed	direct

The main target: Individual creativity could affect job performance through mediatory of time management.

According to the statistics ($t=11/963$). ($P<0.05$), we can say with a probability of 95% that “individual creativity meaningfully affects job performance through mediatory of time management. Since $\beta = 0.685$ thus effect is positive and directed. Considering coefficient of determination equal to 0.469, employees, individual creativity variable with mediatory of time management was able to determine 46.9% of changes in employees, job performance.

First target: Employees’ individual creativity can influence time management.

According to statistics ($t=639.9$), ($P<5\%$), we can say with a probability of 95% that “individual creativity of employees have a significant effect on time management”. Since $\beta=0.598$, thus the effect is direct and positive. Considering determination coefficient equal to 0.357, employees, individual creativity variable was able to explain 35.7% of changes in time management.

Second target: individual creativity can influence job performance

According to statistics ($t=11.095$), ($p<0.05$), it can be said with a probability of 95% that “individual creativity has a significant influence on job performance.” And since $\beta=0.566$, the effect is direct and positive.

Third target: Time management can influence job performance.

According to statistics ($t=3.222$), ($p<0.05$), it can be said with a probability of 95% that “time management has a significant effect on job performance.” And since $\beta= 0.199$, thus the effect is direct and positive.

Considering coefficient of determination equal to 0.495, employees, individual creativity and time management variables were altogether able to explain 49.5% of changes in employees, job performance. According to larger β it can be said that individual creativity has a greater role and a greater effect on employees, job performance.

Discussion and conclusion:

Today, organizations need effective and efficient employees to be able to achieve their goals. In fact, efficiently and effectiveness of organizations, are dependent on the effectiveness and efficiency of their employees. Thus, training people with creative minds are the trump card of organizations. One of the major issues of interest to today's organizations is maintaining a competitive advantage. This feature is only achieved through having creative and innovative people in organizations and will result in improved performance of organizations and will make them overtake in economic marketplace. Scholars showed that the people who have so much high creativity are rare and this ingenuity is general and normally distributed in all people. Therefore, there is no concern of having staff inherently having creativity ability and talent. The important point is



to establish an environment desirable and suitable for employees to reveal, bring up and strengthen their creative capabilities. The environment where employees are working has effect on their creativities and creativity will merely grow, survive and spread over in a suitable and desirable organizational environment. To establish such an environment is affected by some elements which differ in diversity from one organization to another one, depending on the type of organization. For example, when people are suitably rewarded or promoted for presenting new ideas, assuming that they have had a satisfactory performance in the organization, they will try to increase their creativity.

Akgun and colleagues (2009) studied the effect of variables of encouragement, freedom, happiness of environment and experience on innovation and participation (in product and process). The results of various studies in area of effects of time, indicated that allocation of enough time for staff to participate in innovative activities is of much importance on one hand and work pressures have negative effects on establishing a innovation-supporting environment on another hand.

Studying the relationship between individual creativity and time management, Leonidas (2010) while emphasizing the positive relationship between proper time management and Increase in employees, creativity, states that there is a significant relationship between time management and individual creativity. He believes that, the priority of duties is the first step in this regard and managers must classify tasks based on their importance and this classification of tasks must be performed as an annual plan. Also, daily planning of tasks, confidence in the long-term consequences of planning, paying attention to preferences and demands of upper management are the most important actions in this area. In fact, time Management is one of the success factors for any event.

Stella, in 2008, in a research entitled "The relationship between motivation and performance, employees' performance- enhancing strategies with emphasis on motivational factors", came to the conclusion that there is a strong and significant relationship between motivational factors and performance of individuals. In overall, Personality

features and motivational factors of employees have a positive impact on the performance and efficiency of employees. Job performance of employees in organizations are regarded as a complicated variable on which different factors have influence, and these factors can be summed up mostly in the area of personal, organizational and Job factors.

Refrences

- Alvani, seyed Mehdi. 2009. Learner Organization. New Generation of learner organizations, scientific quarterly of Development and Management, Institute for management.pp:8-28.
- Nouri, Rohollah 2012. Relations of time managements and Individual creativities of employees of sport and youth Department in Golestan province,iran , Quarterly of organization behavior studies.pp:70-85.
- Malek Ara, Jamshid 2008. study of relations between time management and job Exhaustion of employees, performed for employees of west Azerbaijan, taxation general office, Quarterly of taxation. No: 4th, pp: 81-89.
- Amabile,T.M.1996.Creativity in context .New York; West View press:16 .
- Akgun,A,Keskin,H&,.Byne ,J. 2009. Organizational emotional .capability .product and process innovation and firm performance: An empiricallysis- Journal of engineering and technology. 26(3):28-45.
- Claessens, B.J.C,Van Eerde, W, Rutte,C.G,&Roe,R.A. 2005.Planning behavior and perceived control of time at work .Journal of organization Behavior,25, PP:937-950.
- Kelly WE. 2005. As Achievement Sails the River of time Use Efficiency in Grade –Point –Average .Educational Research quarterly , Proquest Education Journal ,96(5):PP:3-2
- Leonidas A.Zampetakisa,NANCY Bourantab, Vassilis S.Moustakisa 2010.on the relationship between individual creativity and management .Thinking Skills and creativity (2010).pp:23-32
- Lucas B.Ojo,David A Olaniyan,2008.Effective Time Management in Organization Panacea or Scientific Research ISSN 1450-216 X Vol.24 No.1.PP:127-133 .



A study on effect of individual creativity

- Macan T.H. 1994. Time management: Test of a process model. *Journal of Applied Psychology*, 79(3), 381-391.
- Nor ELela Ahmad Nizan Mohd. Yusuf, Nor Diyana Mohamed Shobri. Samsudin Wahab 2012. Sciverse ScienceDirect. The Relationship between time management and job performance in event management. *EISEVIER Journal, procedia-social and Behavioral Sciences* 65(2012)937-941.
- Oana Dau –Gaspar 2011. The teachers creative Attitude – An Influence Factor of the Student creative Attitude. *International Conference the future of education*.
- Root-Bernstein, R, & Root-Bernstein, M. 2004. Artistic scientists and scientific artists: The link between polymathy and creativity. In R.J. Sternberg, E.G.
- Stella, O, 2008. Motivation and Work performance: Complexities in Achieving Good performance Outcomes, A study Focusing on Motivation Measures and Improving workers performance in Kitgum District Local Government. In partial fulfillment of the requirements for obtaining the degree of MASTERS OF ARTS IN DEVELOPMENT STUDIES.
- Zampetakis, L.A & Vassills, S. & Moustakis 2010. On the relationship between individual creativity and time management. *Thinking Skills and Creativity*, 5, 23-33.
- Zampetakis, L.A. 2008. The role of creativity and productivity on perceived entrepreneurial desirability. *Thinking Skills and Creativity*, 3, 154-162.
- Zampetakis, L.A. & Moustakis, V. 2006. Linking creativity with entrepreneurial intention: A structural approach.
- Zhou, J. & George J.M. 2001. When job dissatisfaction Leads to creativity: Encouraging the expression of voice. *Academy of Management Journal*, 44(4), pp:582-696.

