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**PREDICTION OF STAFF EMPOWERMENT BASED ON LEADERSHIP STYLES
AND THE MANAGERS' ENTREPRENEURSHIP**

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ABSTRACT

This study aims at predicting the staff empowerment based on the leadership styles (the transformational and transactional leadership styles) and the managers' entrepreneurship among the employees in Environmental Protection Agency of Tehran. The statistical population consists of all 800 employees in Environmental Protection Agency of Tehran in 2013. 333 subjects are extracted as the sample size and then analyzed by simple cluster sampling and according to Kerjcie and Morgan table (1970). The measurement tool consists of three researcher-made questionnaires, namely the entrepreneurship, leadership styles and empowerment, implemented on the staff and managers. The validity of these questionnaires is confirmed by three experienced university professors and their reliability measured by Cronbach's alpha coefficient and its coefficient is equal to 0.90 for transformational and transactional leadership styles, 0.86 for entrepreneurship and 0.82 for empowerment. Data is analyzed at both descriptive and inferential levels. The results of data regression analysis indicate that 1- There is a significant correlation between the transformational and transactional leadership styles with staff empowerment in Environmental Protection Agency. 2- There is a significant correlation between the dimensions of transformational leadership style and staff empowerment in Environmental Protection Agency. 3- There is a significant correlation between the dimensions of transactional leadership style and staff empowerment in Environmental Protection Agency. 4- there is a significant positive correlation between the managers' entrepreneurship and staff empowerment in Environmental Protection Agency of Tehran. In other words, the staff empowerment in Environmental Protection Agency is enhanced by increasing the entrepreneurship.

Keywords: Empowerment, entrepreneurship, leadership styles

INTRODUCTION

The human resources (HR) is the most important and valuable asset of any organization. Empowering the staff in the organizations is the most effective way to gain the competitive advantage in the current situation [2], It can be acknowledged that it is impossible to achieve organizational goals without efficient staff. The human resource (HR) plays the main role in growth, dynamism, development and destruction or failure of organizations[1], Due to the environmental changes, which constantly challenge the organizations, they need the empowered staff in order to make the entrepreneurship in work processes because of institutionalized empowerment and thus they will be able to remain in competition scene and manage changes to their advantages. In other words, the human resources development by empowering them can create the entrepreneurship at the large scale in the organization. The organizational entrepreneurship works in the field of organization and develops the current structures, attitudes, norms, technologies, service and products of organization or leads them towards the new ways[10].

The management is considered as one of the most important human activities. The importance and necessity of management is

clarified since the human realized that he cannot do most of the actions alone. The more the community utilizes more groups to do the activities, the more the activities of groups becomes complex and their guidance to reach the goal becomes more difficult. Therefore, the management topic as a science is studied at different dimensions and scopes by experts. The process of changes and diversity of applied tools in life are increasing every day. The rapid changes have been unpredictable by humans during the last century. The global competition and growing business in the East and West and developed and developing countries has created the extremely unstable space for all businesses. To deal with this uncertain environment and constant changes, there is a need for leaders. Obviously, the traditional leadership will not survive in the third millennium and the world requires the transformational leaders. The first views about the leadership can be found in a Chinese text called "big plan" which was probably written in 1120 BC. According to this text, the good leadership requires the clear rules which are based on the environment and are implemented according to the circumstances, with kindness or power. Furthermore, it is explained that the leaders should be perfect in practice[13].The organizational entrepreneurship is a process

in which the products and processes are developed through creating the entrepreneurial culture within an active organization[4],The creation of firm entrepreneurial activities is the most obvious characteristic of entrepreneurial organization. Therefore, according to the importance of these issues, this study aims at investigating the correlation between the staff empowerment with transformational and transactional leadership styles and managers entrepreneurship in Environmental Protection Agency of Tehran.

MATERIALS AND METHODS

This research is based on the purpose of application and data gathering practices, a description of the type of correlation..The statistical population consists of all 800 employees in Environmental Protection Agency of Tehran in 2013. 333 subjects are extracted as the sample size and then analyzed by simple cluster sampling and

according to Kerjcie and Morgan table (1970). The measurement tool consists of three researcher-made questionnaires, namely the entrepreneurship, leadership styles and empowerment, implemented on the staff and managers. The validity of these questionnaires is confirmed by three experienced university professors and their reliability measured by Cronbach's alpha coefficient and its coefficient is equal to 0.90 for transformational and transactional leadership styles , 0.86 for entrepreneurship and 0.82 for empowerment. Data is analyzed at both descriptive and inferential levels.

RESULTS

Main question: To answer the research question that is there any relation between leadership Style (Transformational and transactional) and entrepreneurship with empowerment? Regression was used. Regression equation is in the table below.

Table 1: Summary style regression model (Transformational and transactional) and entrepreneurship with empowerment

Multiple correlation coefficient	Square multiple correlation coefficient	Square multiple correlation coefficient adjusted	Standard error estimates
0.388	0.150	0.143	6.052

Table multiple correlation coefficient, multiple correlation coefficient of determination shows so that the multiple correlation between these variables and 0.38 is low. The coefficient of determination

indicates that 15% of the variability in empowering leadership style by independent variables (Transformational and transactional) and entrepreneurship will be explained.

Table (2) Anova

	Total squares	Degree of freedom	Mean square	F	Significant level
Regression	2134.312	2	711.437	19.424	0.000
Remaining	12050.498	329	36.628		
Sum	14184.811	332			

Significant levels presented in the table above with respect to the value of f is equal to 19.42 and a significance level of less than 0.01 which suggests regression model confirmed that the independent variables are able to predict the dependent variable changes.

Table 3: The coefficients of the independent variables in terms of standard and non-standard values

Independent variable	Not standardized coefficients		Standardized coefficients	t	Significant level
	B	The standard error	Beta		
Constant	19.797	2.840		6.971	0.000
Transformational leadership	.166	0.037	.279	4.532	0.000
transactional leadership	0.096	0.039	.142	2.466	0.014
Entrepreneurship	0.015	0.014	0.058	1.052	.294

Multiple correlation between leadership style (Transformational and transactional) and entrepreneurship with empowerment showed that transformational leadership style with the beta 0.27 And transactional leadership with the beta 0.14 is the explanation of the dependent variable. Entrepreneurship is not a significant variable significant level of 0.05.

sub-question1: Is there a significant correlation between the transformational

and transactional leadership styles with entrepreneurship?

The regression is used to answer the research question whether there is a correlation between the transformational and transactional leadership styles with entrepreneurship? The regression model and its equation are presented in the following table

Table 4: Summary of regression model for leadership styles (transformational and transactional) and entrepreneurship

Multiple correlation coefficient	Square of multiple correlation coefficient	Square of adjusted multiple correlation coefficient	Standard error of approximation
0.370	0.137	0.131	24.148

Table 4 indicates the multiple-correlation coefficient, multiple adjusted correlation coefficient or coefficient of determination, so that the multiple-correlation coefficient between the mentioned variables is equal to 0.37 and at the low level. Furthermore, the coefficient of determination indicates that 13% of variance in entrepreneurship as the dependent variable can be explained by the leadership styles (transformational and transactional) as the independent variables.

Table 5: ANOVA

	Sum of squares	Degrees of freedom	Mean square	F	Significance level
Regression	30447.806	2	15223.903	26.108	0.000
Residual	192429.005	330	583.118		
Sum	222876.811	332			

According to the significance level equal to 0.01, presented in the table above, and the f-statistic equal to 26.1, the regression model is confirmed and the independent variables are able to predict the variance in the dependent variables.

Table 6: The coefficients of independent variables in terms of standardized and non-standardized values

Independent variable	Non-standardized coefficients		Standardized coefficients	t	Significance level
	B	Standard error	Beta		
Constant value	143.581	8.120		17.682	0.000
Transformational leadership	0.965	0.136	0.410	7.103	0.000
transactional leadership s	-0.326	0.154	-0.122	-2.108	0.036

The multiple-correlation between the leadership styles (transformational and transactional) and entrepreneurship indicates that the transformational leadership style with the beta of 0.41 has a significant and positive relationship with entrepreneurship, but the transactional leadership style with beta of -0.12 has a negative inverse relationship with entrepreneurship.

sub-question2: Is there a significant correlation between the dimensions of transformational leadership style and entrepreneurship? The regression is used to answer the research question whether there is a correlation between the dimensions of transformational leadership style with entrepreneurship? The regression model and its equation are presented in the following table.

Table 7: Summary of regression model for dimensions of transformational leadership style and entrepreneurship

Multiple correlation coefficient	Square of multiple correlation coefficient	Square of adjusted multiple correlation coefficient	Standard error of approximation
0.383	0.146	0.133	24.120

Table 7 indicates the multiple-correlation coefficient, multiple adjusted correlation coefficient or coefficient of determination, so that the multiple-correlation coefficient between the mentioned variables is equal to 0.38 and at the low level. Furthermore, the

coefficient of determination indicates that 14% of variance in entrepreneurship as the dependent variable can be explained by dimensions of transformational leadership style as the independent variables.

Table 8: ANOVA

	Sum of squares	Degrees of freedom	Mean square	F	Significance level
Regression	32634.183	5	6526.837	11.219	0.000
Residual	190242.627	327	581.782		
Sum	222876.811	332			

According to the significance level equal to 0.01, presented in the table above, and the f-statistic equal to 11.21, the regression model

is confirmed and the independent variables are able to predict the variance in the dependent variables.

Table 9: The coefficients of independent variables in terms of standardized and non-standardized values

Independent variable	Non-standardized coefficients		Standardized coefficients	t	Significance level
	B	Standard error	Beta		
Constant value	126.955	6.399		19.839	0.000
Perfectionism behavior	0.656	0.554	0.089	1.185	0.237
Perfectionism influence	1.813	0.665	0.209	2.725	0.007
Motivation spirit	-0.950	1.126	-0.062	-0.844	0.400
Mental effort encouragement	2.238	0.688	0.215	3.253	0.001
Attention to personal differences	0.003	0.500	0.000	0.005	0.996

The multiple-correlation between the dimensions of transformational leadership style and entrepreneurship indicates that the perfectionism behavior with the beta of 0.20 has a significant and positive relationship with entrepreneurship and the mental effort encouragement with beta of 0.21 is able to predict the entrepreneurship.

transactional leadership style and entrepreneurship?

sub-question3: Is there a significant correlation between the dimensions of

The regression is used to answer the research question whether there is a correlation between the dimensions of transactional leadership style with entrepreneurship? The regression model and its equation are presented in the following table.

Table 10: Summary of regression model for dimensions of transactional leadership style and entrepreneurship

Multiple correlation coefficient	Square of multiple correlation coefficient	Square of adjusted multiple correlation coefficient	Standard error of approximation
0.306	0.093	0.082	24.820

The table above indicates the multiple-correlation coefficient, multiple adjusted

correlation coefficient or coefficient of determination, so that the multiple-

correlation coefficient between the mentioned variables is equal to 0.30 and at the low level. Furthermore, the coefficient of determination indicates that 9% of

variance in entrepreneurship as the dependent variable can be explained by dimensions of transactional leadership style as the independent variables.

Table 11: ANOVA

	Sum of squares	Degrees of freedom	Mean square	F	Significance level
Regression	20825.103	4	5206.276	8.452	0.000
Residual	202051.708	328	616.011		
Sum	222876.811	332			

According to the significance level equal to 0.01, presented in the table above, and the f-statistic equal to 8.4, the regression model is

confirmed and the independent variables are able to predict the variance in the dependent variables.

Table 12: The coefficients of independent variables in terms of standardized and non-standardized values

Independent variable	Non-standardized coefficients		Standardized coefficients	t	Significance level
	B	Standard error	Beta		
Constant value	164.016	7.978		20.558	0.000
Contingent reward-based leadership	0.526	0.418	0.079	1.259	0.209
Exceptions-based active leadership	1.455	0.422	0.223	3.448	0.001
Exceptions-based passive leadership	-1.269	0.508	-0.175	-2.495	0.013
Laissez faire leadership	-0.005	0.481	-0.001	-0.011	0.991

The multiple-correlation between the dimensions of transactional leadership style and entrepreneurship indicates that the exceptions-based active leadership with the beta of 0.22 has a significant and positive relationship with entrepreneurship, but the exceptions-based passive leadership with beta of -0.17 has the negative inverse relationship with entrepreneurship and is able to predict the entrepreneurship.

sub-question4: Is there a significant correlation between the entrepreneurship and empowerment?

The regression is used to answer the research question whether there is a correlation between the entrepreneurship and empowerment? The regression model and its equation are presented in the following table.

Table 13: Summary of regression model for entrepreneurship and empowerment

Multiple correlation coefficient	Square of multiple correlation coefficient	Square of adjusted multiple correlation coefficient	Standard error of approximation
0.166	0.027	0.025	6.456

The table above indicates the multiple-correlation coefficient, multiple adjusted correlation coefficient or coefficient of determination, so that the multiple-

correlation coefficient between the mentioned variables is equal to 0.16 and at the low level. Furthermore, the coefficient of determination indicates that 2% of

variance in empowerment as the dependent variable can be explained by the transformational and transactional leadership styles as the independent variables. This finding is consistent with the results of research by Haddadpour [6], Golestan[5], have pointed

Table 14: ANOVA

	Sum of squares	Degrees of freedom	Mean square	F	Significance level
Regression	389.749	1	389.749	9.352	0.002
Residual	1345.062	331	41.677		
Sum	2345.811	332			

According to the significance level equal to 0.01, presented in the table above, and the f-statistic equal to 9.35, the regression model is confirmed and the independent variables are able to predict the variance in the dependent variables.

Table 15: The coefficients of independent variables in terms of standardized and non-standardized values

Independent variable	Non-standardized coefficients		Standardized coefficients	t	Significance level
	B	Standard error	Beta		
Constant value	28.503	2.395		11.899	0.000
Entrepreneurship	0.042	0.014	0.166	3.058	0.002

The multiple-correlation between the entrepreneurship and empowerment indicates that the entrepreneurship with the beta of 0.16 has a significant and positive relationship with empowerment. In other words, the increased entrepreneurship will lead to the enhanced empowerment.

CONCLUSION

According to the first finding of this research, there is a significant correlation between the transformational and transactional leadership styles with staff entrepreneurship in Environmental Protection Agency of Tehran and this suggests that 13% of variance in entrepreneurship as the dependent variable can be explained by the transformational and transactional leadership styles as the independent variables. This finding is consistent with the results of research by Haddadpour [6], Golestan[5], have pointed

out that the following educational priorities should be included in educational sciences students' curricula for entrepreneurial development: Performing the educational projects related to the educational sciences course at department of education in different organizations; familiarizing with the way of developing the business plan; familiarizing with the jobs associated with the educational field; familiarizing with the business rules; familiarizing with the financial and marketing skills; familiarizing with the concepts such as the creativity, innovation and relevant skills. In a research entitled "the transformational leadership theory at the top of all theories", Saeidikia [10], has described the effective leadership processes, and this theory has been able to provide the appropriate model for creating the fundamental changes in the bases of most of the current organizations. This

paper investigates the scientific value and applied achievements of transformational theory, and the process of its creation and the ups and downs associated with the evolution of this theory, and finally provides a clear image of nature and dimensions of theory. The various shortcomings and deficiencies of this theory are taken into account in terms of scientific aspect. Mose and Ritoza (2007) have argued that the transformational leadership consists of five dimensions including the effect customization (character and behavior), inspirational motivation, intellectual stimulation and individual attention. The effect customization explains a degree in which the leaders play the inducing roles. The effect customization has two forms: The effect customization characteristic in which the leaders gain the trust and respect, and the effect customization behavior in which the leaders show the excellent behavior and may sacrifice their needs to improvement of their working group goals. According to the second finding of this study, there is a significant correlation between the dimensions of transformational leadership style with the staff entrepreneurship in Environmental Protection Agency of Tehran. According to this finding, the transformational leadership style as the independent variable is able to explain 14% of variance in entrepreneurship

as the dependent variable. This finding is consistent with the results of research by Rezaei and Saatchi [9]. Rezaei and Saatchi [9], have concluded that there is a significant correlation between the leaders' attitudes towards the human factors affecting the productivity and subordinates' organizational commitment ($P < 0.05$) and also between the leaders' leadership styles and the subordinates' organizational commitment ($P < 0.05$). Furthermore, the leaders' attitudes may predict their leadership styles. However, there is no significant correlation between the leaders' attitudes and the leadership behavior description by subordinates. Hook (2005) believes that the leaders, who want to be effective, should have good relationships with staff because these relationships promotes the staff satisfaction and performance and strongly connect them to group through loyalty, gratitude and sense of being a part of group. Harbinson and Myers (1985) have argued that the entrepreneur is the one who cannot be separated from the organization because he is associated with it. He is responsible for providing the conditions under which the other elements of management can do the organizational duties in target organization as well as achieving their personal goals. According to the third research findings, there is a significant correlation between the

dimensions of transactional leadership style and the staff entrepreneurship in Environmental Protection Agency of Tehran. According to this finding, the transactional leadership style as the independent variable is able to explain 9% of variance in entrepreneurship as the dependent variable. This finding is consistent with the results of research by Nazem and Parsa [8]. According to the research by Nazem and Parsa-Moein on the correlation between the entrepreneurship and organizational commitment, [8], the stepwise regression analysis indicates that there is a significant correlation between the entrepreneurship and components of organizational commitment. Bass (1985 and 2003) has argued that the transformational leadership focuses on the social values and is manifested in problems and change. This type of leadership is an introduction to the creation of collective confidence while facing with difficult challenges.

And The research findings indicate that there is a significant positive correlation between the managers' entrepreneurship and staff empowerment in Environmental Protection Agency of Tehran. In other words, the increased entrepreneurship will lead to the enhanced empowerment. It suggests that 2% of variance in empowerment as the dependent variable can be explained by the entrepreneurship as the

independent variable. This finding is consistent with the results of research by Spreitzer [12], and Sawyer [11]. In a research with the aim at investigating the correlation between the empowerment and self efficacy with job satisfaction, Asghari et al (2008) have concluded that there is a direct correlation between the "empowerment" and "job satisfaction" and also between the "empowerment" and "self efficacy", but no correlation is found between the "self efficacy" and "job satisfaction", while the "empowerment" and "self efficacy" have mutual correlation with "job satisfaction". The analysis of results indicates the mutual relationship between the "empowerment" and "self efficacy"; in other words, the teachers' self efficacy promotes their empowerment, and thus the empowerment also increases their self efficacy. Both empowerment and self efficacy affect the "job satisfaction", so that the increased "empowerment" and "self efficacy" can enhance the "job satisfaction" in teachers. According to Spreitzer [12], the empowerment has the personal and organizational origins. Due to the close relationship between the person and his job, the infrastructure can be created for psychological empowerment in person through some measures and encouragement such as the job enrichment, rotation, and flexibility.

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