

## **Individual and Organizational Factors Effective on Individual Creativity**

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### **Abstract**

Successful enterprises need knowledge and cognition of the effective sub-criteria of creativity and analysis of the relations between individual, organizational and individual creativity factors. The aim of this research is to investigate interactions among individual and organizational factors which affect individual creativity, and their influences on individual creativity within a knowledge-based research firm. For this purpose, data were collected from answers to a questionnaire by some 324 people of the enterprise's employees. Research method of this article was descriptive-correlative. Focus correlation analysis was applied for evaluating interactions between the criteria. The results indicate that the "individual factors" are strongly correlated with "organizational factors", while the organic structure has the most influences on individual creativity.

**Keywords: Creativity; Capability; Personality Characteristics; Motivation; Organic Structure; Financial Control; Supportive Leadership Style and Reward System.**

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## 1. Introduction

Turbulent and variant environment of the current world has exposed enterprises to many new challenges. Managing these changes is known as the major element of success and survival of any enterprise. Achieving these abilities requires attention of the enterprise towards creativity and innovation among its employees. In other words, continuous life of the enterprises depends on their reconstruction capability, which can be done through synchronizing objectives with daily conditions and improving realization method of these objectives as well. The enterprise should inevitably support process of creativity and innovation to conform with changes, since uncreative enterprises will be left behind, or will seek to reform themselves. Indeed, existence of environmental changes and their influences on business/industrial enterprises makes reforms necessary [56].

Taking into account the necessity of attending new ideas and innovation in the enterprise, it is required to achieve appropriate contexts to stabilize creative thinking. As one of the major bases of performance in the enterprise, identify factors with any influence on creativity and innovation, and try to support them as much as possible. It is well known that creativity is a need for improvement and development of all activities for any group or enterprise at any level [32].

Ever-changing technology, market and competition have appointed many researches to emphasize on creativity and innovation [19]. Existing clues and signs imply that creativity and innovation can incur severe influences on performance of the enterprise. The following text will provide a conceptual model and relevant methodology by a comprehensive study on the literature, and identifying the factors which can influence creativity. Then, the results will be discussed after implementing statistical analysis.

## 2. Literature Review

**Individual Factors Affecting Creativity.** Individuals make new ideas and develop them for useful applications. Creativity and innovation studies have altogether insisted on factors at individual level [47]. Although results of these studies are usually complicated, they can be categorized in three following key groups which affect individual abilities along with creation of new thoughts:

**Capability.** Most researchers emphasize on basic importance of knowledge [23, 69]. Knowledge has a complicated structure with two intrinsic characteristics: first, information; and second, a framework to interpret, organize, collect and act on this kind of information. This framework which is used by individuals is usually explained as specialty and proficiency. Experience or specialty enables individuals to effectively work on solving new, indefinite and complicated problems using their most useful information which is the prerequisite for creative thinking process [15, 34, 48].

**Dispositions or Personality Characteristics.** Besides capability, creativity is affected by some more behavioral characteristics. Studies by Barron & Harrington (1981), Feist & Gormen (1998), Mumford & Gustafon (1988) on the relation between creativity and behavioral characteristics have clarified this issue. Creative people pay attention to openness and flexibility, independency and great successful motivation. In addition to these main characteristics, consciousness for binding with

creativity exists in technical jobs, whereas dissonance with audience for binding with creativity is observed in artistic jobs [24]. Characteristics including openness and flexibility will foster some kind of search and discovery for creative thinking. Consciousness and criticality will also lead to capability in creative performance and implementation of accurate analysis. Openness causes people to study and predict newly appeared problems of creative thinking, while motivation to seek success and dominance supports and encourages individuals when debuting a new work.

Creative people have much tendency to perform better in activity environments which conform to personality models. For example, in case of autonomy and seeking individual success, there would be better fields to work. Oldman and Cummings (1996) have discovered in their research on participation of employees that creative individuals have little participation in environments with low complexity, low support and severe control. Their participation will be higher, as compared with uncreative individuals, if the working environment bears higher complexity, high support and low control.

Reaction of creative people to environmental characteristics is associated with their personality characteristics with two considerable issues being observed regarding the individual-enterprise interactions. First, it can be expected that: (1) creative people are employed by enterprises with create innovation fields; (2) probability of remaining and maintaining the job in such environments is increased for them [62]. Tendency of creative individuals for making creative work place will make the enterprise as creative as possible [10]. Second, Organizational activities, policies and trends which suppress personality characteristics can prohibit creativity and innovation as well. This fact was evident in a study by George and Zhou (2001) who evaluated consciousness and openness in 159 individuals from office staff. One of the important conclusions made was that the severe supervision interacts with consciousness and will suppress creative behavior.

**Motivation.** As discussed before, the personality characteristics are one of the most significant factors which create motivation within creative efforts. Indeed, their influence on motivation is rather accurate and influential. Criticality, consciousness, competence and syndrome of success seeking are characteristics which cause individuals create high standards. These standards will result in dissatisfaction. Meanwhile, dissatisfaction and its negative influences can be a stimulus for creative efforts [57].

Influence of standards and dissatisfaction on launching creative efforts is correlated with other motivation characteristics of creative individuals. Feldman (1999), and Heinzen, Mills & Cameron (1993) have noticed that excessive curiosity about some phenomena is one of the signs of potential creativity in all fields of effort and scholarship. Researches of Neel & Arvey (1975) unveils that job curiosity is associated with creativity in work place. The strong influence and prevalence or curiosity about a subject is not only required to create and develop the required specialty, but also a determinant of personality characteristics of the creative people which can be useful to motivate for dissatisfaction of the existing situation. Internal factors are more efficient than external factors in creativity making. In fact, a set of comprehensive researches were directed by Amabile et al. (1999) who have insisted on decisive influence of thee internal factors on creativity and innovation. When creative individuals are independent enough, the results will demonstrate that

motivation for creativity and innovation in organizational environments should comply with structures which secure individual engagement. Moreover, it is necessary to use strategies with main emphasis on a significant work [54].

Although the existing signs persist on importance of the internal motivation, role of the external objectives and rewards must not be overlooked [20]. Abbey & Dickson (1983) and Cardinal (2001) have discovered that existence of external objectives and rewards such as payments and promotions are positively related with innovation throughout the enterprise.

Noteworthy about abovementioned variables is that presentation and statement of them is formed just through some factors of organizational environment. In other words, stating the creativity at individual level has a field dependent to other affairs. In fact, creative people are very sensitive towards this type of field influences.

**Organizational Factors Affecting Creativity.** Initial observations on requirements of idea management, attract attentions toward the enterprise and establish valuable influences on both creativity and innovation. Numerous studies have been accomplished on influence of the enterprise level on innovation and creativity [17, 55]. Results of these studies indicate that creativity and innovation are affected by different variables which can be categorized in the four following titles:

The current section will concentrate on the most important group variables which affect creativity including “organic structure”, “financial control”, “supportive leadership style” and “reward system”.

**Organic Structure.** Some important topics are considered in the literature as necessary and essential structures. One of the key concepts of this research introduces flexible organic structure for participation in creativity [11]. In an examination on some 44 small firms, Keller (1978) has discovered that using organic structure (i.e. less mechanical or less bureaucratic) is correlated with the field of innovative products.

Damanpour (1991) offered an analysis on the relation between structure variables and creativity. His results showed that those structures which support use and application of specialty involve strong positive relation with creativity and innovation. Taking into account the role of specialty and proficiency in creativity and innovation, it is no surprise to observe that structures with body of specialty and proficiency would adopt to simplify innovation and creativity. However, it should also be noted that if the organizational structure is unable to integrate various forms of specialty using mechanism of multi-task teams, then creativity and innovation will experience damages in specialty-based structures.

**Financial and Strategic Control.** Creative thoughts are indicative of new and unexamined ideas. In fact, most of them may fail to succeed [36]. In order to develop these ideas, the enterprises must employ considerable amount of time and resources for the corresponding efforts. Costs and risks associated with development of new ideas will not simply lead to investments there. Development of new ideas may incur discontinuities in the current organizational operations [30]. Thereby, the problem entitled “lack of efficiency” will be considered. Thus, the enterprises cannot follow their ideas simply even though being really valuable. Instead, the controls

must be followed up for determination of the ideas irrespective of when and how they are adopted.

One of the most robust controls used by enterprises for following up is strategy. It should also be noted that the strategy which recognizes the real value of creativity and innovation will not necessarily ensure creativity and innovation of the firms. Capon, Farley, Lehman and Hulbert (1992) have evaluated *Furtune500* Company in terms of strategy, environment, enterprise and innovation. Firms are classified in two different groups of enterprises on the basis of these variables which demonstrate success in their efforts to achieve benefit through innovation. Internal development is a kind of strategy while the other kind of strategy is acquisitive. Firms which obey internal development strategy will invest in R&D more than those who follow acquisitive strategy.

Strategy not only affects investment but also forms a kind of applied control through the enterprise. Importance of these controls or decision making standards regarding creativity and innovation has been explained in Hitt's work (1996). They have found that firms which benefit from financial controlling systems honor creativity and innovation less than firms which use strategic controls or business development. Since the creative ideas cannot be examined and are typically expensive, application of the financial controls will lead to rejection of the new ideas as part of efficiency and profitability. Influences of conducting financial controls may be more accurate and influential.

Strategic controlling affects innovation as well. Firstly, the control (either strategic or financial) forms a variety of objectives throughout the enterprise and established rewards to achieve the objectives. As previously discussed by Abbey and Dickson (1983), organizational objectives and rewards can strongly affect creativity and innovation at enterprise level. Secondly, the standards applied in evaluation process bear valuable influence on culture against modeling and feedback. Culture is the enabling term of creativity promotion and can at the same time react towards creative ideas [29].

**Supportive Leadership Style.** Role of leaders as a supportive factor was investigated in creativity and innovation studies [61]. Although, it seems that the leaders have direct and important role in formation of creative efforts. Creative efforts have not been defined and structured well due to their being new and complex. Therefore, these efforts usually have interactions with multiple sections and relatively turbulent environments. In this case, leaders must direct employees to structure the problem-solving activities [68].

Investigations by Kazanjian, Drazin and Glynn (2000) indicate that technical complexity and interaction between multiple groups is because of a crisis. This crisis will undesirably appear in most creative efforts. Success of any project is dependent on solving the crisis. Leaders must explain source and importance of incidents for all team members here. Perception and sensation activities about the mentioned topics need two forms of specialties. First, leaders of creative efforts need broad understanding of the enterprise, its strategies, business activities and social-political structure [46]. This point is really significant since it indicates that insulating the leaders from creative efforts will suppress creativity and innovation. Second, since the crises usually bear a technical-social nature, leaders of creative efforts need technical specialty.

Leaders are not just responsible to manage the affairs, they must rather create motivation. Vision is known as the major mechanism used by eminent leaders (charismatic and revolutionary leaders) for their followers. In contrast with the leadership in other areas, vision is not defined for motivation of the creative employees [38], though charismatic and revolutionary leaders adopt to accept and support innovation [39]. Vision will not itself prompt motivation within creative individuals, but it is obvious that definition of missions (i.e. professional/technical, challenging and great plans) is used as a stable motivation technique [51]. Definition and explanation of the meaningful missions by leaders have valuable influence on team work development.

How leaders interact and manage can affect innovation as well. Researches by Maier and coworkers (1962) on this subject have introduced strategies which must be used by leaders in order to manage the group in terms of problem solving task based on business. Their findings revealed that leaders should: (1) seek for innovative or creative solutions; (2) consider problems based on more general terms rather than definite results; (3) encourage and persuade team members to research on an area of information; (4) avoid premature evaluations; and (5) expand discussions in order to create multiple ideas.

**Reward System.** People decide to work because they want to fulfil their needs. They think about outcome and rewards obtained for them before starting a work. Many of these rewards are decided and controlled by the enterprise, which are usually known as one of the most effective motivation tools [59]. The enterprises can create, encourage and persuade creativity using this motivation tool.

Some researchers and scholars have identified some aspects of the reward system as being effective on appearance of creativity.

Amabile (1997) has taken into account the influence of internal and external motivation on creativity. He has argued that the internal motivation is more important and more of a determinant than the external motivation. He has also claimed that the maximum creativity occurs when one feels that he/she is motivated by internal factors (because the work is attractive, interesting, satisfying and challenging enough in nature) rather than external factors (including wage and salary, job position, rank and promotion, winning a prize, satisfaction of others, prevention from punishment, obeying orders of others, getting positive evaluation which do not include nature of work). Amabile (1998) argues that rewarding creativity is one of the characteristics of a creative enterprise while he prohibits using external rewards such as money to allure the employees for creativity. Monetary rewards may cause individuals to feel they are controlled by someone else, whereas refusing to reward creativity can incur negative feelings in the enterprise. In this case, people may feel they are misused or their creative activities have not been properly acknowledged. As a result, internal motivation can rarely be observed along with being unkind. Amabile (1997) suggests some rewards for creating internal motivation and increasing the creativity: Let employees enter their favorite projects; acknowledge creative works of individuals and groups generously; let them work on their favorite idea even though uncertain about its success, because rewarding system recognizes risk as an influential element of creativity. Kanter (1983) believed that the internal rewards such as providing increased dependency

and opportunities for individual and professional growth can support creativity and innovation.

### 3. Problem Description

The current study tries to determine interactions between individual factors and organizational factors in addition to their influences on creativity. In this regard, the following questions may be advanced:

- What are the effective individual factors for creativity?
- What are the effective organizational factors for creativity?
- What is the correlation between these individual and organizational factors, and how do they affect creativity?

According to the abovementioned questions, the following hypotheses can be put forward:

- There is a significant relation between individual factors and creativity.
- There is a significant relation between organizational factors and creativity.
- There is a significant relation between individual factors and organizational factors.

### 4. Methodology

**Tools of Data Collection.** Questionnaires were used for the purpose of data collecting. They included 104 questions based on theoretical aspects of the research and their validity was verified by relevant professors and experts. Crownbach's Alfa was used in order to determine reliability. Reliability of the questions for creativity, capability, motivation, personality characteristics, organic structure, financial control, supportive leadership style and rewarding system were calculated to be 80.8, 71.2, 82, 80.2, 75.2, 71.6, 93.5, 85.3%, respectively.

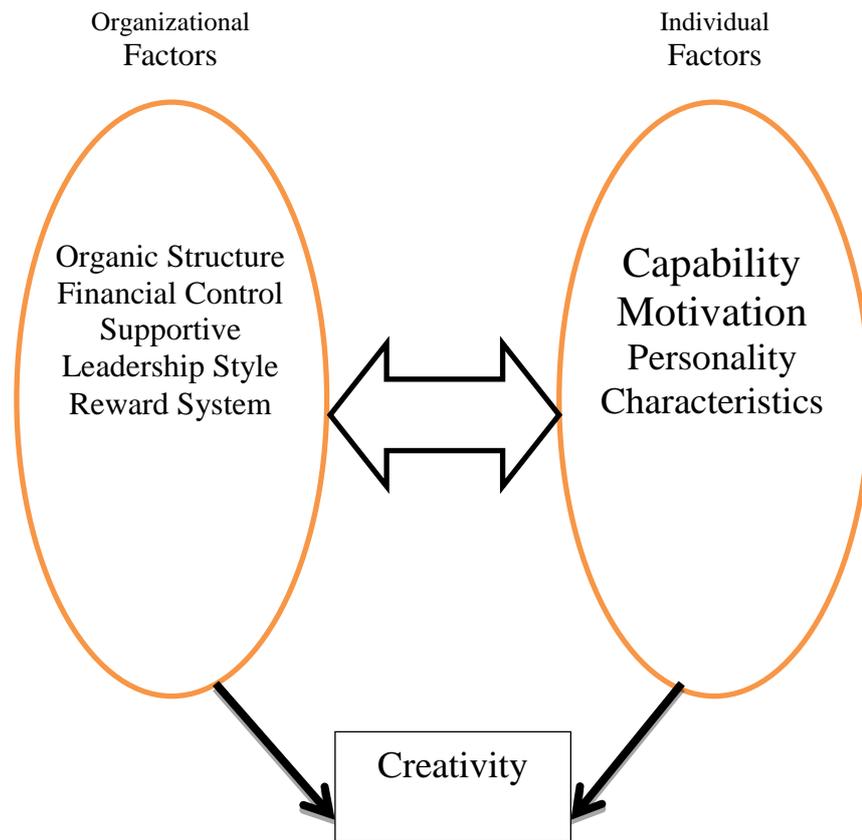
**Statistical Population.** Statistical population of this study was scholars and experts from a governmental research firm with three departments. The first department has 111 scholars while the second and third departments have 91 and 177 scholars, respectively. Total number of scholars will thus be 379 people.

**Method of Sampling.** Turning to limitation of the statistical population in the three abovementioned departments, data collection has been accomplished by counting all individuals (whole counting). Finally, 324 questionnaires were collected, because 85% of the participated scholars decided to answer them.

**Method of Data Analysis.** Focus correlation analysis has been applied to analyze the interactions between organizational and individual factors, while stepwise multiple regression has been used to evaluate influence of individual and organizational factors, as well as, the individual creativity. SAS9, STATISTICA & and SPSS16 softwares have been employed for the analyses.

### 5. Results and Discussion

The model proposed for the interactions between individual and organizational factors and their influences on creativity is depicted below.



*Fig.1. Conceptual model of research*

**Interpreting Correlation for Individual and Organizational Variables.** As evident in table1, indexes of organizational and individual factors have high levels of correlation with each other. It can be observed that indexes of organic structure and motivation bear the highest value of correlation, whereas those of financial control and capability bear the lowest value of correlation. Several implications can be made based on table1. For instance, among the criteria of organizational factors, rewarding system shows the least correlation with personality characteristics.

*Table1. Coefficients of correlation between variables of organizational and individual factors*

<b>Coefficients of Correlation</b>	<b>Personality Characteristics</b>	<b>Motivation</b>	<b>Capability</b>
Organic Structure	0/310399	0/595881	0/404339
Financial Control	0/245775	0/383692	0/152003
Supportive Leadership Style	0/340920	0/588382	0/404373
Reward System	0/175271	0/380755	0/213364

Table 2. Summary of focus correlation analysis

N=324	Organizational	Individual
Number of Variables	4	4
Extracted Variance	85/61%	100%
Total Prediction	25/89%	26/62%
Variable 1	Organic Structure	Personality Characteristics
Variable 2	Financial Control	Motivation
Variable 3	Supportive Leadership Style	Capability
Variable 4	Reward System	-

**Interpreting Focus Correlation.** Table 2 summarizes the value of variance in the data by focus correlation technique. The extracted values of variance for organizational and individual factors indicate that the focus roots cover 100% of the variance in individual factors and 85.61% of the variance in organizational factors. They are both statistically significant, and verify application of focus correlation analysis.

Table 3. Statistical Test

Focus Roots	Chi-Square Tests with Successive Roots Removed					
	Canonical R	Canonical R <sup>2</sup>	Chi-Squared	df	P	Lambda Prime
0	0/675096	0/455755	0/0042205	12	0/000	0/525899

Significance level of focus correlation is usually considered 0.05 for interpretation. As listed in table3, just the first focus variable has been proved statistically significant considering the P-Value. Moreover, Statistical experiments including “Lambda” and “K2” justify this observation. Therefore, looking at table3 and figure2, for interpreting the output data, it will be concentrated on sections which relate to the first focus variable. Importance of the correlation between organizational and team factors will be specified by focus correlation ( $R_c$ ) and Specific Value ( $R_c^2$ ). According to table3, focus correlation of the first focus variable was 0.67 and its specific value was 0.45. Since focus correlation ( $R_c$ ) cannot provide the portioned variance between the two type of factors, prediction index was used instead. Prediction index relevant to  $R^2$  is obtained from multiple regression analysis. It can be seen, based on table2, that the average organizational power for prediction of the individual variables is more than 26%. These findings imply that there is significant correlation between individual and organizational factors, with the former being positively affected by the latter.

Inter-structure coefficients are used to evaluate importance of each index in creating a significant correlation. Generally speaking, researchers use three coefficients to interpret importance of each variable in creating significance namely standard, structure and inter-structure coefficients. Hair et al. (1998) have noticed that semi-structure coefficients are more valid for interpretation. It is also observed that all variables of both types bear high inter-structure coefficients, so they have high importance in creating significant correlation. It seems that within the organizational factors, variables of organic structure and supportive leadership style have the key role while variables of rewarding system and financial control have been proved less important. Furthermore, within the individual factors, motivation

and personality characteristics are the most and the least important variables, respectively.

*Table 4. Structure coefficients for the significant focus variable*

Data Collection	Structure Coefficients of 1 <sup>st</sup> Focus Variable	Inter-Structure Coefficients of 1 <sup>st</sup> Focus Variable	Variables
Results (Individual Field)	0/56	0/51	Personality Characteristics
	0/97	0/921	Motivation
	0/65	0/607	Capability
	0/5559		Extracted Variance
Predictions (Organizational Field)	0/89	0/833	Organic Structure
	0/56	0/529	Financial Control
	0/89	0/837	Supportive Leadership Style
	0/55	0/501	Reward System
	0/5681		Extracted Variance
	0/67		Coefficient of Focus
	0/89		Prediction Index of 1 <sup>st</sup> Focus Variable

Taking into account the high values of structure coefficients for both types of variables, it can be concluded that variables of the organizational factors impose significant correlation and influences on variables of the individual factors. All variables of the organizational factors have high level of correlation in creating focus variable of the results, out of which organic structure and supportive leadership style affect the results of individual factors more than others.

Sensitivity analysis was run additionally on independent variables in order to measure validity of the focus correlation analysis. Thereby, one of the variables of organizational type was omitted each time, and the focus correlation analysis was replicated again. Validity of the data was verified as no significant change was noticed in the value of structure coefficients for other variables during each run.

**Studying the Correlations of Individual Factors and Creativity.** This section aims to study the mean and correlation indexes between the variables of research at individual levels. The results of correlation indicate that triple components of individual factors (personality characteristics, motivation and capability) have direct relation with creativity. The highest correlation of independent variables (personality characteristics, motivation and capability) with dependent variable (creativity) was observed between motivation and creativity while the lowest correlation was reported between capability and creativity.

*Table 5. Correlation between individual factors and creativity*

Variables	Personality Characteristics	Motivation	Capability	Creativity
Personality Characteristics	1			
Motivation	0/444	1		
Capability	0/267	0/536	1	
Creativity	0/266	0/279	0/105	1

**Studying the Influence of Individual Factors on Creativity.** Stepwise regression modeling was used as one of the statistical methods of examinations of this research. Stepwise method is one of the most powerful techniques in which the most significant variables enter the equation one by one. This process continues until the error of significance test reaches 5%. This research benefits from three independent variables (personality characteristics, motivation and capability) to predict changes of the dependent variable (creativity) within the individual factors.

As it is evident from table6, regression analysis has proceeded just two steps. The motivation variable has entered the equation (model) at first step whose correlation coefficient (R) has been reported to be 27.9%. The value of determination coefficient ( $R^2$ ) is measured 7.8% while the adjusted R-squared is calculated 7.5%. At second step, the values of  $R^2$  and  $R^2_{AJ}$  are increased to 10.3 and 9.7% with introduction of the second variable which is personality characteristics. Meanwhile, the coefficient of multiple correlation reaches 32.1 during this step. In other words, according to the adjusted R-squared ( $R^2_{AJ}$ ), 9.7% of changes in dependent variable (creativity) is determined by two variables of motivation and personality characteristics.

Table 6. Summary of the proposed model

Model	R	R-Squared	Adjusted R-Squared	Standard Error of the Estimation	Durbin-Watson
1	0/279	0/078	0/075	0/31731	-
2	0/321	0/103	0/097	0/31342	1/809

However, judgment about role and share of motivation and personality characteristics on determination of the dependent variable should be assigned to Beta values, because they are standardized and enable comparison and determination of the relative share for each variable.

According to the values of Beta in table7 it seems that the role and share of motivation in determining the dependent variable (creativity) is more than personality characteristics. Based on the measured value of beta for motivation, standard deviation of the dependent variable (creativity) will change up to 0.2 once the standard deviation of the motivation experiences one unit change. On the other hand, when standard deviation of the personality characteristics changes one unit, change in standard deviation of its dependent variable will be just 0.177.

Table 7. Coefficients of the proposed model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig. B	
	Coefficient of Regression (B)	Standard Deviation	Coefficient of Regression (Beta)			
1	Fixed value	3/724	0/078	-	47/563	0.000
	Motivation	0/121	0/023	0/279	5/208	0.000
2	Fixed value	3/562	0/094	-	37/780	0.000
	Motivation	0/087	0/026	0/200	3/391	0.001
	Personality Characteristics	0/075	0/025	0/177	3/008	0.003

a. Dependent Variable: KH

**Studying the Influence of Organizational Factors on Creativity.** This section tries to investigate mean and correlation indexes between research variables at organizational level. The results of correlation indicate that quadruplet variables of the organizational factors (organic structure, financial control, supportive leadership style and rewarding system) demonstrate a direct relation with creativity. The highest correlation of independent variables (organic structure, financial control, supportive leadership style and rewarding system) and dependent variable (creativity) is reported to occur between organic structure and creativity, while the lowest correlation is observed between rewarding system and creativity.

*Table 8. Correlation between organizational factors and creativity*

Variables	Organic Structure	Financial Control	Supportive Leadership Style	Reward System	Creativity
Organic Structure	1				
Financial Control	0/441	1			
Supportive Leadership Style	0/675	0/412	1		
Reward System	0/530	0/444	0/699	1	
Creativity	0/181	0/152	0/108	0/019	1

\* Correlation is significant at 0.01 level (2-tailed)

**Studying the Influence of Organizational Factors on Creativity.** For organizational factors, statistical experiments have used a stepwise regression model in which the most powerful variables enter the equation one by one. This trend continues until the error of significance test reaches 5%. This study has been based on 4 independent variables (organic structure, financial control, supportive leadership style, and reward system) for prediction of the dependent variable (creativity).

As it is evident in table9, regression analysis has proceeded just for one step. At the first step, variable of organic structure enters the equation (model) whose coefficient of correlation (R) with the dependent variable was evaluated 18.1%. Coefficient of determination ( $R^2$ ) in this step was 3.3% while the adjusted R-squared was reported to be 3%. Value of  $R^2$  calculated by simultaneous method was compared with that of stepwise method, and it was demonstrated that other defined variables have represented inconsiderable role in determination of the dependent variable which was shown insignificant.

*Table 9. Summary of the proposed model*

Model	R	R-Squared	Adjusted R-Squared	Standard Error of the Estimation	Durbin-Watson
1	0/181	0/033	0/030	0/32494	1/938

Nevertheless, judgment about role and share of organic structure on determination of the dependent variable should be assigned to Beta values in table10, because they are standardized and they provide comparison and determination of the relative share for each variable as well.

According to the values of Beta it was noticed that role and share of the structure in determining the dependent variable (creativity) is more than the independent

variable, namely organic structure. Based on the measured value of beta for organic structure, standard deviation of the dependent variable (creativity) will change up to 0.181 with the standard deviation of the motivation experiences being changed one unit.

Table 10. Coefficients of the proposed model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig. B	
	Coefficient of Regression (B)	Standard Deviation	Coefficient of Regression (Beta)			
1	Fixed value	3/797	0/100	-	38/007	0/000
	Organic Structure	0/097	0/029	0/181	3/302	0/001

a. Dependent Variable: Creativity

## 6. Conclusions and Future Works

**-At Individual Level Using Multiple Regression Technique:** Results of correlation were indicative of an existing direct relation between triple individual elements (personality characteristics, motivation and capability) and creativity. The greatest and the smallest correlation of independent variables (personality characteristics, motivation and capability) and dependent variable (creativity) were identified in motivation-creativity (27.9%) and capability-creativity (10.5%), respectively. The coefficient of correlation between personality characteristics and creativity was measured as 26.6%. Using stepwise technique, the adjusted R-squared between two variables of motivation and personality characteristics was evaluated 9.7%. In other words, 9.7% of the dependent variables (creativity) is determined by these two variables.

**-At Organizational Level Using Multiple Regression Technique:** Results of correlation uncovered direct relation between quadruplet organizational elements (organic structure, financial control, supportive leadership style, and reward system) and creativity. The greatest and the smallest correlation of independent variables and dependent variable (creativity) were identified in motivation-creativity (27.9%) and capability-creativity (10.5%), respectively. The coefficient of correlation between financial control and creativity was obtained 15.2%, while this value was 10.8% when it was measured between supportive leadership style and creativity. Using stepwise method, the adjusted R-squared by the variable for organic structure was measured 3%. In other words, 3% of the dependent variables (creativity) is determined by organic structure.

**-Studying the Interactions between Organizational Factors and Individual Factors Using Focus Correlation:** Studying the results will reveal that indexes of organizational and individual factors bear great correlation with each other. Indexes of organic structure have the highest correlation (59.5%) whereas indexes of financial control and capability have the lowest values of correlation (15.2%). Index of prediction shows that the averaged power of the organizational factors is at least 26% greater than the individual factors. These results imply that there is significant relation between organizational and individual factors with the former positively

affecting the latter. Moreover, looking at the great value of structure coefficients for both types of factors, it can be concluded that organizational variables impose noticeable correlation and influences on individual variables. All variables of organizational factors have high proportion of correlation in creating focus variable of the results among which the variables of organic structure (89%) and supportive leadership style (89%) have the most dominant influences on individual factors.

**Suggestions for Further Works.** This section provides suggestions for future researches based on the results achieved by this study. It has been tried to use the suggestions as guidance for further studies such that managers of enterprises could be able to investigate all aspects and dimensions of the organizational creativity and provide the proper context to achieve it.

#### **At Individual Level**

-Motivation: Based on the results of this research it can be argued that motivation has the greatest correlation with creativity at individual level. Managers can enhance creativity among their employees by supporting this structure using the following suggestions:

Conditions must be modified such that the activities would be attractive enough for employees to stop feeling tired; individuals can have the opportunity to grow by learning new skills; employees are admired for their good work; employees can improve their abilities and skills and they can concentrate on whatever that interests them.

-Personality characteristics: Based on the results of this research it can be argued that motivation has proper correlation with creativity at individual level. Managers can foster creativity among their employees by supporting this structure using the following methods:

Conditions must be established within the enterprise such that employees would enjoy paying attention to their new ideas; employees take part in challenging activities more than any time before; individuals must be responsible for their tasks; employees should think about how to implement their tasks better before beginning the job; employees must work energetically on their predefined activities; people must look at their failures as a valuable experience and they must regard ambiguity as an opportunity.

-Capability: According to the results of this research it can be argued that motivation has the poorest correlation with creativity at individual level. The following suggestions have been made in this regard:

Conditions must be established within the enterprise such that specialty should be in accordance with defined tasks; employees should have relevant knowledge about their job's field, and they must be aware of the latest advancements related to their work.

#### **At Organizational Level**

-Organic structure: Based on the findings of this research it can be argued that organic structure has the greatest correlation with creativity at organizational level. Managers can increase creativity of their employees by supporting this structure using the following suggestions:

Use opinions of managers, experts and employees at any organizational level, stop concentrated decision-making at higher managerial level, define flexible duties and using rules and regulations as least as possible by eliminating extra rules and regulations, create proper mechanisms to assign responsibilities and adequate freedom to the experts in order to be able to use their potential skills, preparing for open and continuous relation with individuals inside and outside the enterprise, observing environmental changes, and trying to fit continuously to these changes.

-Financial control: Based on the discoveries of this research it can be argued that financial control has the greatest correlation with creativity at organizational level. The following solutions have been suggested for this purpose:

Benefit from technologies of other enterprises properly; conditions must be modified such that experts access the required equipments and financial resources to launch their assigned tasks.

-Supportive leadership style: It can be argued that the variable of supportive leadership style has a poor correlation with creativity according to the results of this research and the suggestions below can be offered in this regard:

Conditions must be modified such that employees are admired for their positive performance; employees should be supported during ambiguous and complicated situations; they are able to take part in determination of long-term objectives; they should be able to take part in making decisions which may affect their whole life; freedom of the employees in achieving their goals must be supported well; mission objectives should be defined properly and explained to the employees; employees who offer new ideas should be admired; creative efforts (from the beginning to the end) should be supported adequately; any individual should be free to express his/her ideas; employees are encouraged to cooperate with each other; manager of the enterprise decides to solve the problems by consulting his/her employees.

-Reward system: Based on the findings of the present research it can be argued that reward system has the poorest correlation with creativity and the following solutions can be proposed:

Provide proper system for paying rewards to employees; rewards must be calculated based on their performance within the enterprise; and there should be proper payment conditions for people who deserve receiving the reward.

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