

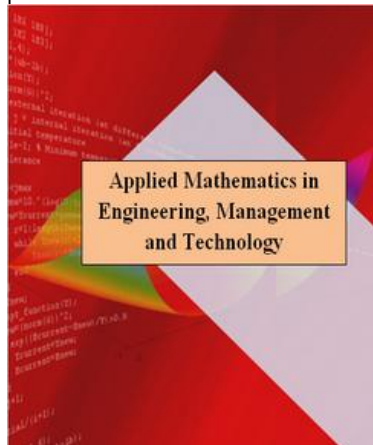
## The Relationship between Affecting Factors on Corporate Entrepreneurship in Metal Industries of Kaveh Industrial City

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### Abstract:

This study is conducted with aims of representing the relationship between affecting factors on Corporate Entrepreneurship in metal industries of Kaveh industrial city in the years of 2012. In this study with exploring of literature review and previous research about Corporate Entrepreneurship, affecting factors on it respectively is considered: creativity, leadership style (transformational and transactional leadership), organizational structure (Centralization, complexity and formalization) and organizational culture (involvement at work, mission, adaptability, consistency). The pollution of research includes 4700 employee involved in metal industries of Kaveh industrial city and among whom, 355 people is considered as sample by using Cochran formula and sampling method of rational random classification. Data collection is carried out through questionnaires. Technical characteristic of questionnaire including reliability and validity studied by using of various criterion, for example Cronbach's Alpha method is used as a

one the methods of reliability assessment for this research, that reliability coefficient is obtained for standard questionnaires MLQ leadership style 0.81, Torrance creativity 0.84, Denison organizational culture 0.80 and Robbins organizational structure 0.78. In addition, to test the validity of questionnaires used Content validity and construct validity. Data analysis is carried out through SPSS, Smart PLS and LISREL software in two aspects of descriptive (frequency, frequency percentage, mean, Standard deviation) and inferential (Structural Equation Modeling, Shapiro-Wilk Test, Pearson correlation coefficient, Exploratory factor analysis, Confirmatory Factor Analysis, Simple and multi-variable linear regression). The results show that there is a significant relationship between affecting factors on Corporate Entrepreneurship so that that there is a significant relationship between manager's leadership style and it's dimensions with employee creativity; there is a significant relationship between manager's leadership style and it's dimensions with organizational structure; there is a significant relationship between manager's leadership style and it's dimensions with organizational culture; there is a significant relationship between organizational structure and it's dimensions with employee creativity; there is a significant relationship between organizational culture and it's dimensions with organizational culture. In relationship between manager's leadership style and creativity, organizational structure and organizational culture variables play the role of mediator.

**Keywords:** Corporate Entrepreneurship, Leadership Style, Creativity, Organizational Culture, Organizational Structure, Metal Industrial

### 1. Introduction and Problem Statement

Organizations nowadays are in transition from bureaucratic state to organizational entrepreneurship status in most of the developing countries. In this regard, organizational entrepreneurship is a window into the operation of sustainable competitive advantage, innovation and pioneering for organizations (Kuratko; Hornsby and Bishop, 2005) and can elevate organizational competencies and develop opportunities through creating internal innovation (Russell, 1999, quoted by Salehi and Shoghi, 2012). In addition, it has a great effect on survival, growth, profitability and modernization of organizations especially in large organizations (Heinonen and Korvela, 2004). It is stated in many researches that organizational structure, risk taking, reward, leadership style, organizational resources, organizational culture and creativity are of factors that affect organizational entrepreneurship (Furst, 2005). Many factors in the field of affecting organizational entrepreneurship are

presented, as it is mentioned and creativity, leadership style, organizational structure and organizational culture are of the most important one.

Creativity nowadays forms an important part of organizational life, because rapid changes of the world have effected the operational environment of the organizations in a way that the organizations and their managers have to find novel ways to adapt themselves to global developments and changes. Therefore, all organizations need new thoughts and novel ideas to protect their existence. New ideas and thoughts are as a spirit in the organization's body and survive it, but compact and tough competitions, tastes and desires of the customers make the organizational affairs unpredictable. In such a situation, new ideas and ways should be provided in order to maintain the organization's relationship with customers, maintain the market share, cover the needs and tastes of customers, achieve an appropriate share of the global market, success in the struggle against clients and so on (Bolanowski, 2008). For this reason, creativity and innovation are known as a new competitive field for product development in organizational and engineers and product designers are expected to be creative, idea generator and innovative in addition to competency and merit (Kudrowitz, 2010).

Leadership style is another factor that affects organizational entrepreneurship. Effective leadership should provide a direction to accomplishment of organizational goals for all of its employees. The connection link between organizational and individual goals may be weakened and fragmented without leadership. This can lead to undesirable situations that individual work is for achieving individual goals in them and at the same time, the organization loses its effectiveness and efficiency and fails to achieve its goals. Therefore, the existence of leadership is vital and essential in order for an organization to remain successful. Even the best employees have to know that how they can contribute in achieving organizational goals (Shoghi, A and Shoghi, B, 2012).

It should be mentioned about organizational structure as another effective factor on organizational entrepreneurship that creation of an open and creative structure is a way to generate creativity so that the authorities should be prepared to hear new and innovative ideas, continuously. They should also protect new ideas and providing of novel ways, and endure continuous change process that is essential for creativity. These affairs demand consideration of organizational dimensions such as formality, complexity and centralization (Shafihzadeh and Shoghi, 2010).

Organizational culture is another effective factor in organizational entrepreneurship. Studies show that culture affect goals, strategy, organizational performance, motivation, job satisfaction, innovation and creativity, entrepreneurship, decision-making, level of the employee participation, level of satisfaction and commitment, hard working and level of anxiety. Researches also show that excellent and successful organizations own strong and effective culture (Dong, W., Zhongfeng, s. and Dongtao, 2011).

The oil industry has played a significant role in our country's economy. Providing a large part of the country's foreign exchange earnings, thus undeniable reliance of various economic sectors on revenues from oil exports in order to meet import needs, is the most important role of the oil industry in Iran's economy. Accordingly, unipolar economy and its dependence to oil causes that some factors such as sanctions lead to economical and social problems in the country, while Iran has numerous professional capabilities in industry, agriculture, tourism, etc. that have not been considered properly. Of course, reduction in the high dependence of the economy on oil revenues demand the creation of suitable platforms for weighted economic growth in different regions. Metal industry is one of the factors that can be effective in reducing dependence on oil.

Metal industry is like a driving engine for industrial development in any country. According to Iran's reserves and rich resources of metals, it can improve its position in world markets by exporting of metal products through planned and strategic program for the growth of this industry.

In August 28, 2011 Kaveh Industrial City was officially introduced as "Kaveh Special Economic Zone" by the President Deputy and the confirmation on Iranian Parliament. This shows the importance of this industrial city; while it is important to note that among the 113 companies that are active in Kaveh industrial city, 36 companies (31.8%) belong to the field of metal industries and this in turn shows the importance of the position of the metal industry in the industrial section ([www.kavehcity.ir](http://www.kavehcity.ir)).

Like all other industries, the metal industry faces some problems among which one can refer to the unsuitability of the human resources structure quantitatively and qualitatively; governmental nature of the structure of most metal industry manufacturers and the state monopolies of this section; its dependency on the domestic markets and neglecting the development of the exports and international markets; the weakness in supplying the raw materials for the manufacturers; sanctions; the high price of the foreign currencies and its effect on producing the needed raw materials of the manufacturing units (Shahravan & Khoushechin Bahar, 2011).

Different solutions have been offered to solve the above-mentioned problems. The most important offered solutions in this regard are as follow: the suspension of debts of the qualified units to the state, and injection of funds if necessary; granting finances and credits needed to the development, renovation, and reconstruction of the mentioned industries; creating some professional holdings for the metal industry; reinforcing the international and regional transactions in order to exchange the experiences and to access the high techs; and developing the technological cooperation with the universities, research centers, administrative offices, private section, and cooperative centers (ibid).

As it is seen in the mentioned solutions, in most cases the solution is dependent on the financial resources. This is while Sadeqi and Sepehrdust (2001) stated that the effect of the granted finances of the banks on the efficiency of the metal industry is negative. In other words, due to the reducing output, the increase of the granted finances that act as the working capital will lead to the reduction of the final efficiency. This fact indicates that the problem of the Iranian metal industry is not limited to financial issues, but we have to look for some other issues such as the lack of personal and organizational creativity. We believe that studying the effective factors on the creativity and detecting the weaknesses and strengths of this field can help the industry uses the opportunities and enter into the international markets and consequently lead to the reduction of the oil-dependency and the reduction of the effects of sanctions. According to what has been said, it can be realized that why this year is named in the name of national production, support for capital and labor in Iran.

This research aims to find an answer to the following question: is there any relationship among factors affecting organizational entrepreneurship in metal industry of Iranian Kaveh Industrial City?

## 2. Research literature

In this part of the paper, we introduce some concepts and definitions of the variables of organizational entrepreneurship, creativity, leadership style, organizational structure and organizational culture.

### 2.1. Organizational entrepreneurship

In the present circumstances that organizations deal with issues such as rapid changes in technology, complex competition, rapid growth in the number of new competitors, variety of customer's needs and demands, and general desire to enhance efficiency and productivity, businesses can have competitive strength that support organizational entrepreneurship, which is determined as a factor of stimulation and strengthening innovation and competitiveness, and factor of balance in dynamic economy, by taking an active and impressive role. Various studies indicate that despite the fact that organizations accepted the importance of innovation and entrepreneurship in today's competitive word, they were not successful in the creation of innovation and entrepreneurship due to the lack of proper infrastructures (Zheng; Yang and Mclean, 2009).

Organizational entrepreneurship consists of set of activities that make the exploitation of innovative competitive advantages in an organization possible and is an approach in institutionalization of innovation in organizations. In fact, organizational entrepreneurship is as a window to utilization of sustainable competitive advantage, innovation, and pioneering for the organizations (Kuratko; Hornsby and Bishop, 2005).

### 2.2. Creativity

Creativity is one of the hottest terms in the business world. Especially with regard to the globalization process and the very rapid development of the modern technology, creativity is now the most effective way of survival and competition in the global markets for the companies (Zheng, Pablo and Pelayo, 2009).

Santrock (2004) believes that the creativity is the ability to think in new and unusual ways and to come to exclusive and original solutions for the problems (Shoghi and Mortazavi, 2012). Indeed the creativity is the interaction of the talent, process, and environment, through which the person or group produces an understandable product that is both new and useful for its targeted society (Makel and Plucker, 2008). Besides, Torrance (1989) believes that creativity is formed out of four following components:

- Fluency: the ability to establish a meaningful relationship between thought and the expression, measured on the basis of the number of thoughts or solutions in a specific piece of time
- Originality: the ability to think in unusual ways with coming to unusual, odd, and subtler answers
- Flexibility: the ability to think to a single new problem in different ways;
- Elaboration: the ability to pay attention to all details during a task (Shoghi and Mortazavi, 2012)

### 2.3. Leadership style

Leadership style is the set of attitudes, attributes, and skills of the managers that is formed on the basis of the value system, trust in the employees, leadership tendencies, and sense of security in the ambiguous situations. Generally speaking, leadership style determines the atmosphere, culture, and strategies of the organization (Rowold, 2009). In this research we have used Bass and Avolio's model (2000) in which the dimensions of the leadership style are classified into three groups, mainly the transformational leadership, transactional leadership, and non-intervening leadership; yet in this research we have just studied the two former leadership styles.

**-Transformational leadership** : is the performance of a leader who is going to motivate his/ her followers by idealized influence (Charisma), inspiring motivation, intellectual stimulation, and individual consideration in order to push them in a direction beyond their own transient interests (Bass and Bass, 2008). The objective of the transactional leadership goes beyond meeting the transient needs. Transactional leader employs his/ her optimism, intellectual charisma, and many other personal skills to promote the goals of the others, and runs the persons and organizations toward a higher performance (Skakon, et al, 2010). At the following part, we will refer to some dimensions of the transformational leadership.

- Charisma (idealized influence): this dimension implies the idealized influence of the leaders who act as the real model of act so that their act leads to the manifestation of the desirable behaviors (Nielsen & Cleal, 2010). Charismatic leadership is a part of the transformational leadership and includes the idealized characteristics and idealized behavior. The most prominent idealized characteristics of a leader are to inspire the sense of honor and pride in the followers and to participate in their activities in order to gain the interests of the group (Shoghi and Shoghi, 2010).
- Inspirational motivation: inspirational motivation is one of the capabilities of the transformational leader that offers a character of the leader that that inspirationally stimulate the followers to have a suitable behavior. This factor describes the leaders who make the followers participate in illustrating the future vision, and accordingly strengthen their commitment and who encourage the followers to come along the mentioned process (Moriano & Molero, 2011). Thus, the transformational leaders have to act in a specific manner and encourage and stimulate their followers. This specific behavior implicitly includes to show their enthusiasm and optimism and to encourage the teamwork (Shoghi and Shoghi, 2010).
- Intellectual stimulation: as a capability of the transformational leaders, intellectual stimulation plays an important role in the process of transformation of the organization. The transformational leaders try to encourage their followers to be innovative and creative. These leaders encourage the change of thinking methods of the problem solving and always use analogies and metaphors in order to increase the knowledge of their followers (García-Morales, et al, 2011; Bass & Riggio, 2006), thus they may use the new and creative ideas for solving the problems. Bass believes that the intellectual stimulation is a main stimulus in the followers to think to their beliefs, their values, their problems, and solving the problems (Avolio, et al, 1999, quoted in Shoghi and Shoghi, 2010).
- Individual Considerations: paying attention to the individual differences of the followers, communicating with each of them, and stimulating them by assigning the responsibilities to them for the sake of their learning experiences are the main subjects of the individual considerations. Transformational leaders help their followers activate their own potential talents in order to increase their accountability in the organization. On other words, the leaders attempt to develop the potential abilities of the individuals (Horwitz & Horwitz, 2008). Individual consideration is a key element in the relationships between the transformational leader and the followers. Transformational leaders may use the strategy of assignment as a tool for the growth of their followers relying on the personal challenges (Nurthouse, 2001).

**-Transactional leadership:** According to Burns (1978), transactional leadership is a style of leadership based on the transaction between the leader and the follower so that the mutual interests of the both parties are met. This leadership style includes some dimensions such as the contingent rewards and management –by- exception (active- passive) (Shoghi and Shoghi, 2010). At the following part, we will refer to these factors of the transformational leadership.

- **Contingent reward:** contingent rewards refer to the process of the transaction between the leaders and followers in which, the followers' attempts in transacted against some specific rewards. In this type of the leadership, the leader tries to gain the agreement of the followers about what is needed to do and what is granted for doing that things (Bass & Bass, 2008).
- **Management -by- exception (active-passive):** management -by- exception refers to those behaviors of the leaders that implies the corrective criticisms, negative feedbacks, negative reinforcement, and predicting the failures and problem solving. Management-by-exception emerges in two forms: passive and active. In active form of management -by- exception, transactional leaders supervise the tasks of their subordinates and make sure of the completion of those tasks. The leader in this form, do all necessary and needed things to prevent any deviation from the standards and findings the bugs and mistakes. But the passive leaders in this form of management -by- exception apply some due punishments just if the standards are not met; that is, they passively wait for the mistakes of their followers so that attract their attention to the negative feedbacks or official reproach before dealing with the corrective activities. Although this latter form of the management has been proved to be ineffective but some managers still apply it to supervise over a large number of the subordinates who report him directly. This process is less effective than the contingent awards and the components of the transformational leadership (Northhouse, 2001).

#### 2.4. Organizational structure

Organizational structure and human resources are two basic pillars of any organization and they are both needed to form an organization. Every organization can correct its structure and increase the creativity of its organizational and human resources in order to improve its performance and efficiency and hence approaches to its predetermined goals (Katsikea, et al, 2011).

Organizational structure is the set of ways through which the activities of the organization are divided into some known tasks and these tasks are coordinated (Shoghi and Nazari, 2012). In this research, to determine the dimensions of the organizational structure we have used Robins Organizational Structure questionnaire that classifies the dimensions of the organizational structure to complexity, formalization, and centralization, as explained in the following section of the paper.

- **Complexity:** is the scale of the separation in each organization as measured and tested through three channels: horizontal, vertical, and spatial or geographical
- **Formalization:** is the scale of standardized jobs, as understood from the variables of organizational chart and organizational guideline
- **Centralization:** is the concentration of the power in one point, while decentralization is the lack or shortage of such concentration. It is to be noted that the centralization refers back to the dispersion in the decision- makings, not in geographical separation and dispersion (Robbins, 1998).

#### 2.5. Organizational culture

Organizational culture is a miniature of cultural macro processes in organizational environment and with the advent of areas such as information and communication technologies, globalization and the way of dealing with it, demographic changes, continuing education, knowledge explosion, ethical crisis, learning organization and increasing knowledge, considering the quality and effectiveness in organizations leads to the necessity of good infrastructure in creative organizational culture (Julia, 20011).

Robbins (2005) defined the culture as a system of shared concepts and ideas between members of the organization that determines their behavior towards each other and people outside the organization. Denison (2000) also stated that organizational culture is the fundamental value, beliefs and moral principles that plays an important role in the organizational management system.

Denison organizational culture model (2006) is used in the present investigation (Figure 1). This model is newer and more comprehensive than other models of organizational culture. Based on this model, characteristics of organizational culture are: involvement, compatibility, adoptability, and mission. Description of each of these features together with their measurement indicators are presented in the following:

- **Involvement (Being involved in work):** effective organizations make their employees able, establish their organization on the basis of working groups, and develop the capabilities of their human resources at all levels; thus the members of the organization feel commitment against their work and see themselves as a part of the body of the organization. At all levels, the individuals feel that they are involved in decision makings and these decisions are effective in their work, and their work is directly tied with the organizational goals. According to a Korean CEO, more involvement in work means being completely involved by heart and mind. In this model, the mentioned characteristic is measured in this model by measuring three indexes:

- Empowerment: the individuals have the needed authority, initiative, and ability to administer their work. This makes them feel the sense of ownership and responsibility in organization.
- Team orientation: team works in order to fulfill the common goals are highly appreciated in the organization, so that like the managers, the employees feel that they are responsible for their work. These organizations rely on the groups for doing the works.
- Capability development: in order to supply their needs and survive in the completion arena, the organizations develop the skills of their employees continually.

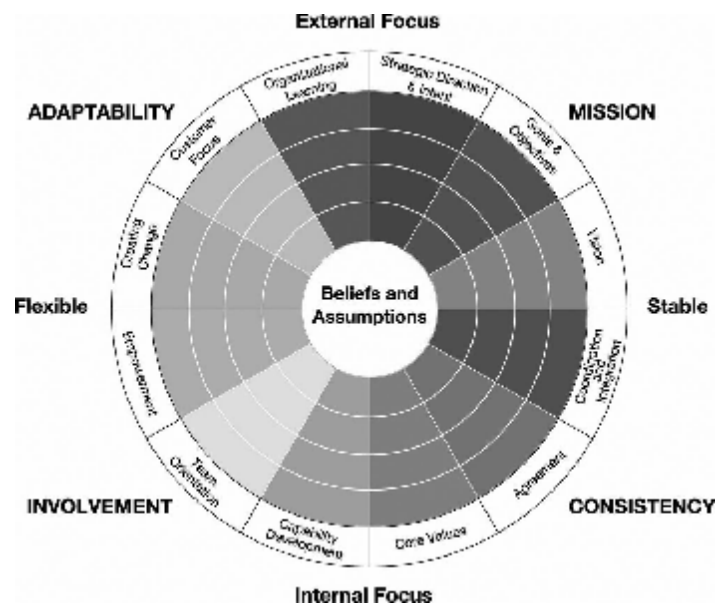


Fig. 1. Denison's Organizational Culture Model (Denison 2000)

- **Consistency (Stability and Consistency):** the available literature show that the effective organizations are those that are consistent and stable, and the behavior of their employees roots in the core values of the organization; the leaders and followers are skilled in getting agreement (even in cases that their attitudes are contradict; and the organizational activities are coordinated and integrated. The organizations with such characteristics have a strong and distinctive culture and have a sufficient influence on the behavior of their employees. Consistency is measured by three indexes as follow.

- Core values: the members of the organization are common in some values that form their identity and expectations.
- Agreement: the members of the organization are able to come to an agreement in the cases of the difference of their attitudes. This agreement includes both the agreement at lower levels of the organization and middle and upper levels of the organization.

- Coordination and integration: organizational departments that have different functionalities can co-work to meet their common goals and objectives. The organizational frontiers will not be messed through such co-working.

- **Adaptability:** the organizations that are integrated well will change difficultly; thus internal integration and external adaptability can be advantages and priority for the organization. Adaptable organizations are conducted by the customers; they take risks, take lessons of their mistakes, and they are open to change on the basis of their capacity and experience. They are frequently improving the abilities of the organization in order to value the customers. Adaptability is measured by three indexes as follow:

- Creating change: the organization is able to create new ways for meeting its needs and know the environment of the organization, and respond to the current stimuli and exceed the future changes.
- Customer focus: the organization is able to understand the customers and respond their needs and to be prepared to supply their doming needs. Indeed the customer focus is a level at which the organization is conducted toward the customer satisfaction.
- Organizational learning: this index measures the signals that the organizations receive and interpret; and the opportunities that the organizations create to encourage the creativity, knowledge and abilities.

- **Mission:** it would be said that the most important feature of the organizational culture is its mission. The organizations that don't know where they are and what is their situation will be in a wrong path. Successful organizations have a clear idea of their own goals and direction so that they clearly define their organizational and strategic goals and the mission of themselves. Most problematic organizations are those who have to change their mission. When an organization changes its mission, then it has to change its strategy, structure, culture and behavior as well. In such conditions, a strong leader specifies the mission of the organization and creates a culture that supports that vision.

- Strategic direction and intent: clear strategic intents show the direction of the organizational goals so that everyone can make himself participate in that area or industry.
- Goals and objective: goals are tied to the mission strategy and the perspective of the organization and specify the direction of the work of every individual in the organization.
- Vision: the organization has a common vision about the future. Vision illustrates the core values of the organization, makes the hearts of the human resources closer to each other, and simultaneously specifies the directions.

### 3. Research background

Shoghi and Mortazavi (2012) studied the relationship between manager's leadership style and staff creativity using Sashkin model. They realized that there is a significant relationship between leadership style and staff creativity. Gumusluoglu and Ilsev (2009) stated in a research entitled "Transformational leadership, individual creativity and organizational innovation", that there is a positive and significant relationship between transformational leadership and staff creativity, and transformational leadership affects staff creativity through psychic empowerment. Findings also showed a positive relationship between organizational innovation and psychic empowerment. Shoghi, Rezaei A. and Rezaei H. expressed in a study entitled "Explanation of the relationship between transformational leadership and staff creativity", that there is a significant relationship between staff creativity with transformational leadership and its dimensions (i.e. idealized influence, inspiring motivation, mental arousal, and individual consideration).

Macaux (2009) stated in a study entitled "Leadership and organizational process in successful development of small and medium enterprises" that small and medium enterprises usually grow rapidly at the initiation of their work, but it does not last long. This stop is because of lack of structure existence in the organization and lack of leadership and education to create new designs or implementation of changes. Haritha and Venkat (2004) presented a study entitled "Effect of the follower's personality and organizational structure on transformational leadership". Their research used a pilot plan whose aim was to understand the effect of the follower's open-mindedness in taking the experience as one of the five personality characteristic and organic organizational

structure on the transformational leadership. The five dimensions of the transformational leadership in the mentioned research include idealized influence (attributes), idealized influence (behavior), inspiring motivation, individual considerations, and intellectual stimulation. The results of this research showed that the followers' open-mindedness for the experiences will increase the idealized influence (behavior), inspiring motivation, and intellectual stimulation; and although an organic organization has no effect on the transformational leadership, but if it is combined to the follower's personality, it can make an effect on the transformational leadership. Moreover, the idealized influence (behavior) and the intellectual stimulation will reach to their highest rate when there is an organic organization and followers' open-mindedness.

Ramanaidu (2011) conducted a study entitled "Exploring the relationship among transformational leadership, organizational culture, emotional commitment and staff performance (Case study: Educational institutions in Malaysia)". He found out that organizational culture is in positive relationship with staff performance and creativity, and transformational leadership has a mediatory role in the relationship between organizational culture and staff performance. Nguyen (2010) stated in a study entitled "the effect of leadership style and organizational culture on knowledge management activities in small and medium organizations" that effective leadership style depends on the type of organizational culture. The evidences also showed that proper leadership style has the largest shares in organizational culture and the leaders can affect knowledge management directly or indirectly through organizational culture. It should be mentioned that understanding of transformational leadership and organizational culture could be subjected to other underlying circumstances such as national culture, organizational history and performance.

In another research, Shafihzadeh and Shoghi (2012) studied the relationship between the organizational structure and the employee's creativity and found that there is a significant negative and direct relationship between the organizational structure and its dimensions (i.e. complexity, centralization, and formalization) on one hand and the creativity of the employees on the other hand. Finally, Shafiqi (2010) studied the relationship between the organizational structure and the creativity on the employees of Qazvin Alborz Cable Company. He found that there is a significant negative relationship between the organizational structure and the employee's creativity. Other findings showed that there is no significant relationship between the formalization in the organization and the creativity of the employees and there is a significant negative relationship between the variables of the creativity and the complexity and centralization in the organization.

Castiglioni (2008) found in a research entitled "Helping the employee's creativity in the library's environment: an important management concern for the managers of libraries" that the flourishing field of potential capacity of individual creativity indicates itself in the case that it is accepted by the organizational culture. Arbioon, Azizi, Shoghi, Dehghan Najm Abadi (2012) illustrated the relationship between organizational culture and staff creativity and stated that there is a significant relationship between them.

Cordnaich, Moghimi, Ghanie and Yazdani (2009) investigated the relationship between organizational structure components and entrepreneurial culture in Tehran University. The dimensions of entrepreneurial culture are individual creativity, reward system, risk taking, guidance, control, management support, identity, communication model, cohesion and conflict taking; and the dimensions of organizational structure are centralization, complexity and formalization. The results depicted that there are relationship between all ten dimensions of culture and entrepreneurial organizational structure (except risk taking), but the results of regression analysis showed that management support, award system and control system have more significant effect on entrepreneurial organizational structure more than the others. Samoori (2000) found in a study entitled "the relationship between organizational structure and organizational culture in government agencies" that the amount of individual autonomy, management support and guidance, risk taking, identity, variety of communications and entitlement to vote decreases with increasing centralization, complexity and formalization.

### 3.1. Theoretical framework of the research

The conceptual framework of this research has been designed with regard to the existence of four main constructs (leadership style, creativity, organizational structure, and organizational culture), so that the leadership style plays the role of independent or predictive variable; creativity plays the role of dependent or criteria variable, and finally the organizational structure plays the role of mediating variable. Considering the relationship between the construct, we have looked for the effect of the manager's leadership style in the employee's creativity on one hand, and the mediating role of the organizational structure in the relationship



between the leadership style and the employee's creativity on the other hand. Figure 2 shows the conceptual model of the research. Additionally, the main and sub-hypotheses of this research are proposed as follow:

Main hypothesis: there is relationship between factors affecting organizational entrepreneurs

First sub-hypothesis: there is a relationship between the manager's leadership style and the employee's creativity

Second sub-hypothesis: there is a relationship between the manager's leadership style and the organizational structure

Third sub-hypothesis: there is a relationship between the manager's leadership style and the organizational culture

Fourth sub-hypothesis: there is a relationship between the organizational structure and the employee's creativity

Fifth sub-hypothesis: there is a relationship between the organizational culture and the employee's creativity

Sixth sub-hypothesis: there is a relationship between the organizational structure and the organizational culture  
 Centralization, complexity and formalization

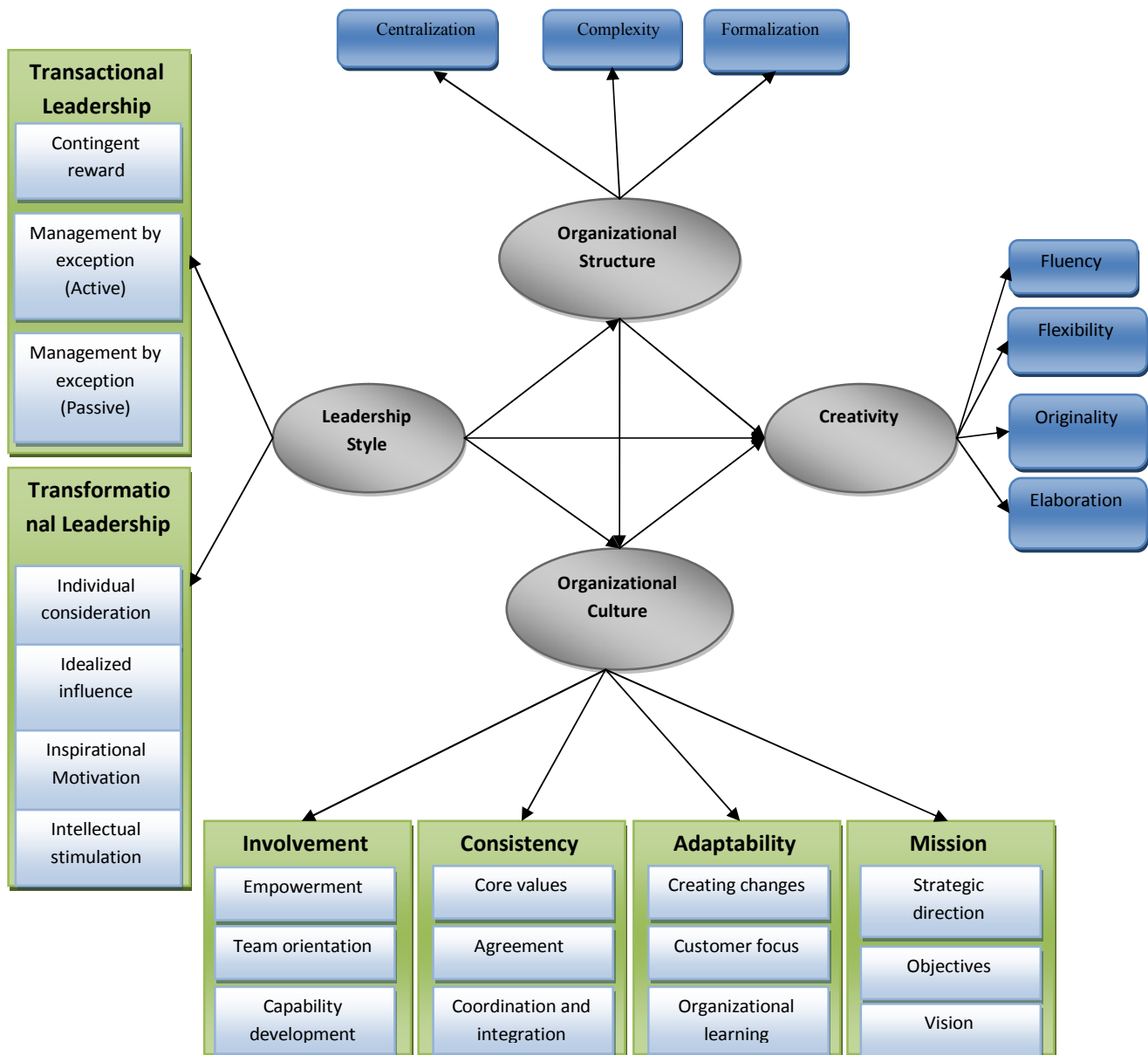


Figure 2. Conceptual Model of the research

#### 4. Methodology

The methodology of this research is functional according to its objective, and it is a causal- descriptive one according to its data collection method. Moreover, this is a quantitative research with regard to the type of its collected data. Accordingly, we planned and distributed a series of questionnaires in order to collect the opinions of the employees of the metal industry of Iranian Kaveh Industrial City, and the collected results were recorded. Since in this research the causal relationship was going to be studied, the methodology of the research is causal with regard to the relationship between the variables; and we have used the structural equation model to come to a comprehensive analysis of our conceptual model. This model is the best one for analyzing the researches in which the observed variables have some measurement errors and the relationship between their variables is complicated. Using this method, one can measure the precise of the factors or observed variables on one hand, and study the causal relationship between the latent variables and the scale of explained variance on the other hand (Kalantari, 2009, p. 34). Structural equation model encompasses two models: measurement model and the structural model; and the variables of the model are divided into two groups: latent variables and observed variables. In this research, leadership style and organizational culture are latent variables and the transformational leadership style and transactional leadership style are the observed variables that are considered as the indexes of the leadership style. On the other hand, in this research the involvement, consistency, compatibility, and mission are the observed variables that act as the criteria for measuring the organizational culture.

##### 4.1. Statistical population, sampling method, and sample size

The population of the research contains all employees in the companies of metal industry in the Iranian Kaveh Industrial City, which includes 4700 employees. The companies of the metal industry in the Iranian Kaveh Industrial City (36 companies) were divided into 4 groups: aluminum metal manufacturing companies, non-aluminum metal companies, household appliances, and automobile.

Relying on the relative stratified random sampling method, 12 companies out of the 36 active companies in the metal industry were selected as the sample. Then using the Cochran formula, we specified the sample size for our 4500 subject population. To use the Cochran formula it is necessary to consider its assumptions. The assumptions of the Cochran formula include:  $p=q=50\%$  (on the basis of probabilistic method);  $z$  is the standard statistic for normal distribution that is equal to 1.96 at the confidence level of 95%;  $d$  is the maximum allowable error (equal to 5% for this research); and  $N$  is the number of the employees in all relevant companies. The sample size ( $n$ ) is calculated according to equation 1 on the basis of the Cochran formula (Sarai, 2000):

$$n = \frac{z^2 pqN}{Nd^2 + z^2 pq} \quad (\text{equation 1})$$

Thus using the equation 1, considering the number of the statistical population (4700), 355 subjects were selected as the statistical sample. At the last step, regarding the number of the employees of each company and the total sample, we calculated the sample of each company separately. It is to be mentioned that 370 questionnaires were distributed among which the number of 360 questionnaire were completed and got back (response rate of 97%), and five questionnaires were removed due to their incompleteness. Thus, the statistical operation was conducted on 355 subjects.

##### 4.2. Data collection instrument; reliability and validity

In order to collect the needed data of the research, we used four standard questionnaires with totally 176 questions. The questionnaire of this research contained the followings: Employee's Creativity Questionnaire with 60 questions (16 questions for fluency, 11 questions for flexibility, 22 questions for innovation, and 11 questions for elaboration) (Torrance, 1959, quoted by Rezaei and Manouchehri, 2009); Organizational Culture Questionnaire with 60 questions (17 questions for involvement, 14 questions for consistency, 14 questions for adaptability and 15 questions for mission); Manager's Leadership Style Questionnaire with 32 questions (20 questions for transformational leadership and 12 questions for transactional leadership) (Bass and Avolio,

2000); and finally the Organizational Structure Questionnaire with 24 questions (7 questions for complexity, 7 questions for formalization, and 10 questions for centralization) (Robbins, 1998).

#### 4.2.1. Reliability

In order to measure the reliability, we conducted a pre-test on 30 separate subjects. To do this, the Cronbach's alpha was calculated by SPSS20 software, where the reliability coefficient for the questionnaires of leadership style, creativity, and organizational structure were 0.81, 0.84, and 0.78 respectively. Moreover, we retested the reliability of the questionnaires on the same pilot subjects and the results of these two pre-tests were compared. The results showed that there is no significant between the two test results, and thus the reliability of the questionnaires was confirmed.

After the pretest, the reliability of the main test was calculated using the whole sample data. To do this, we used PLS method. In this method, item reliability is being used to determine the reliability of the questionnaires. The item reliability itself is calculated by testing the factor loadings through evaluating correlation value of the items of one construct to that construct, then of this value is equal to or higher than 0.4, then we can claim that the reliability of that model is acceptable (Hulland, 1999), and if the relevant factor loading is less than 0.4, then we can remove that specific question from our model and its subsequent analyses. In this step, the researcher has to be careful about removal of the questions and do this removal only when he ensures that such a removal will not interrupt the research process. In this research, we removed some questions (those with coefficient of less than 0.4) after calculating the factor loading of the questions, so that 2 questions from the first part of the questionnaire (creativity), 1 question from the third part of the questionnaire (organizational structure) and 1 question from the fourth part (organizational culture) were removed and 172 items (observer variable) remained to be analyzed.

#### 4.2.2. Convergent and divergent validity

To determine the validity of the questionnaires of the pretest, we used the content validity method and so the questionnaires were confirmed by the supervisors, advisors and experts of the field after doing the needed corrections. After completing the pretest, the validity of the questionnaires of the main test was specified by two criteria of the structural equation model, mainly the convergent and divergent validity criteria. Moreover, to specify the construct validity, we used structural equation model and SMART PLS software. Construct validity is divided into convergent and divergent validity. In convergent validity, AVE (Average Variance Extracted) criterion was used whose results for the variables of the research are shown in table 1.

Table 1. AVE values for the convergent validity

Variable	Transformational leadership	Transactional leadership	Fluency	Flexibility	Innovation	Elaboration	Involvement	Consistency	Adaptability	Mission	complexity	Formalization	centralization
AVE	0.691	0.643	0.709	0.716	0.767	0.701	0.652	0.611	0.602	0.622	0.791	0.751	0.738

The criterion value for the acceptance level of AVE is 0.5 (Hulland, 1999). As it is shown in table 1, all AVE values for the constructs are higher than 0.5 and these values confirms the convergent validity of the research questionnaire at an acceptable level.

In divergent validity, the difference between the items of a construct is compared to the items of other constructs of the model. To do this, the square root of the AVE in each construct is being calculated against the values of the correlation coefficient between the constructs (Devellis, 2003). In this regard, we will need a matrix that includes the matrix main diagonal of the AVE coefficient of each construct, and the values of the

upper and lower of the main diagonal includes the correlation coefficient between each construct and the other constructs. In this research, the root square of the AVE of each construct was higher than the correlation coefficients of that construct against the other constructs (values of the column and row of that same construct), and this fact shows the acceptable divergent validity of the constructs.

## **5.Data analysis**

### **5.1.Model fitness**

In this step, we used LISREL 8.8 to do the confirmatory factor analysis in order to assess the measuring models of the research. In this process, if the following conditions are met, the fitness of the model is suitable: the obtained significance level of chi- square (p-value) is higher than 0.05; Chi-square to degrees of freedom is less than 3; the statistic value of the Root Mean Square Error of Approximation (RMSA) is less than 0.05; the value of Comparative Fitness Index (CFI), General Fitness Index (GFI), Adjusted General Fitness Index (AGFI), and Non-Norm Fitness Index (NNFI) are higher than 0.9 (Joreskog & Sorbom,1996). All above cases were confirmed in this research, thus the models of measuring the construct of this research are of suitable fitness.

### **5.2.Findings of the demographic characteristics**

The findings of the research in descriptive statistics part (characteristics of the participants) showed that 92% of participants were male and remaining 8% were female. Marital status of the subjects implied that 42% of them were single while remaining 58% of them were married. Educationally, the biggest group of the subjects was the group of employees with associate degree (46%), while 23% of the subjects had the education lower than high school diploma, 27% of them had bachelor degree, and 4% of the participants had master degree or higher. The findings on the participant's fields of study showed that 36% of the subjects had studied in technical and engineering fields, 26% had studied in humanities and social sciences, and remaining percent of the subject had studied in other fields of study. The age range of the subjects was something between 20 to 52 years old among which 12% of the subjects were less than 25 years old, 56% were between 25 to 35 years old, and remaining 32% if the subjects were higher than 35 years old. With respect to the employment status of the subjects, 89% of the subjects had a mid-term contract, 8% of the subjects were permanent contract, and 3% of the subjects were subcontractors. Finally, with regard to the work experience of the participants, 28% of the subjects were less than 5 years experienced, 40% of the subjects had something between 5 to 10 years experience, 19% of the subjects had something between 10 to 15 years experience, and remaining 13% of the subjects had a work experience more than 15 years.

### **5.3.Testing the hypotheses**

One assumption of using the correlation and regression tests is the normality of the distribution of the research variables. In this research we used Shapiro- Wilk test to investigate the normal distribution of the research variables, and since the significance level test in all distributions were higher than 0.05, thus we can claim that the scores in all variables follow a normal distribution.

Since the correlation coefficient is the basis for determining the accuracy of the estimated regression, thus these two techniques has to be used simultaneously (Kalantari, 2009). In order to test the hypotheses of the research, we first applied Pearson's Correlation test (to determine the direction and intensity of the relationship between the variables) and then the regression (to predict the changes of the dependent variable by the independent variables). These were done in SPSS 20. Finally, the structural equation model was used in SMART PLS 2 in order to show the final confirmation of the hypotheses, as illustrated in the next parts of the paper.

#### **5-3-1- Testing the main hypothesis**

There is a relationship among the factors affecting organizational entrepreneurship. Testing sub-hypotheses is needed in order to check the main hypothesis so that the main hypothesis will be confirmed if the sub-hypotheses of the research is accepted.

### 5-3-2-Testing the first sub-hypothesis: there is a relationship between the employee's creativity and the manager's leadership style.

To test this hypothesis we first used Pearson's correlation test and then applied the multiple linear regression test. The results can be seen in tables 2 and 3.

Constructs	Manager's Leadership style	Employee's creativity	Organizational structure	Organizational culture	Significance level
Manager's Leadership style	1	0.718	0.702	0.834	0.000
Employee's creativity	0.718	1	-0.672	0.702	0.000
Organizational structure	0.702	-0.672	1	-0.630	0.000
Organizational culture	0.834	0.702	-0.630	1	0.000

	Significance level	Statistic t-values	Non-standardized $\beta$ values	standardized $\beta$ values
Fixes value	0.001	3.553	3.654	
Transformational	0.000	44.911	0.923	0.861
Transactional	0.002	-7.112	-0.129	-0.133

Since in the regression and correlation matrix, the significance level is less than the error value (0.01), thus there is a significant relationship between the manager's leadership style and its dimensions, and the employee's creativity at 95% level of confidence. Moreover, as shown in table 3, beta coefficients indicate that 86% of the employee's creativity is predicted through the transformational leadership style and 13% is predicted through the transactional leadership style (remaining percentage results from the measurement error). Hence, as the findings show, transformational leadership style has a stronger role in increasing the creativity of the employees. The linear regression equation for the first sub-hypothesis is as follows:

$$Y = 3.654 + (0.861) X_1 - (0.133) X_2$$

Thus for a unit of change in the transformational leadership style and transactional leadership style, the creativity of the employees will change 0.86% and -0.14% respectively.

### 5-3-3-Testing the second sub-hypothesis: there is a relationship between the manager's leadership style and organizational structure.

To study this hypothesis, we refer to the tables 2 and 4.

	Significance level	Statistic t-values	Non-standardized $\beta$ values	standardized $\beta$ values
Fixes value	0.000	4.443	3.331	
Transformational	0.003	34.654	0.843	0.802
Transactional	0.002	-5.766	-0.140	-0.193

Since in the regression and correlation matrix, the significance level is less than the error value (0.01), thus there is a significant relationship between the manager's leadership style (and its dimensions) and the

organizational structure at 95% level of confidence. Moreover, as shown in table 4, beta coefficients indicate that 80% of the changes in organizational structure are predicted through the transformational leadership style and 19% are predicted through the transactional leadership style; that means transformational leadership style has a stronger role in creating a suitable organizational structure. The linear regression equation for the second sub-hypothesis is as follows:

$$Y = 3.331 + (0.802) X_1 - (0.193) X_2$$

Thus for a unit of change in the transformational leadership style and transactional leadership style, the organizational structure will change 0.80% and -0.19% respectively.

#### 5-3-4-Testing the third sub-hypothesis: there is a relationship between the manager's leadership style and organizational culture.

To study this hypothesis, we refer to the tables 2 and 5.

	Significance level	Statistic t-values	Non-standardized $\beta$ values	standardized $\beta$ values
Fixes value	0.000	4.211	4.901	
Transformational	0.001	31.932	0.941	0.833
Transactional	0.000	-9.165	-0.249	-0.201

Since in the regression and correlation matrix, the significance level is less than the error value (0.05), thus there is a significant relationship between the manager's leadership style (and its dimensions) and the organizational culture at 95% level of confidence. Moreover, as shown in table 5, beta coefficients indicate that 83% of the changes in organizational culture are predicted through the transformational leadership style and 20% are predicted through the transactional leadership style; that means transformational leadership style has a stronger role in determining the organizational culture. The linear regression equation for the third sub-hypothesis is as follows:

$$Y = 4.901 + (0.833) X_1 - (0.201) X_2$$

Thus for a unit of change in the transformational leadership style and transactional leadership style, the organizational structure will change 0.83% and -0.20% respectively.

5-3-5-Testing the fourth sub-hypothesis: there is a relationship between the organizational structure and the employee's creativity. To study this hypothesis, we refer to the tables 2 and 6.

	Significance level	Statistic t-values	Non-standardized $\beta$ values	standardized $\beta$ values
Fixes value	0.000	3.367	3.188	
Centralization	0.001	-21.932	-0.470	-0.391
Formalization	0.000	-6.165	-0.395	-0.302
complexity	0.001	-31.932	-0.531	-0.344

Since in the regression and correlation matrix, the significance level is less than the error value (0.05), thus there is a significant relationship between the organizational structure (and its dimensions) and the employee's creativity. The negative sign of the correlation coefficient in table 6 shows an inverse relationship between the organizational structure and the employee's creativity. The standard beta coefficients in the table indicate that 39% of the changes in employee's creativity are predicted through centralization, 30% are predicted through the formalization, and 34% are predicted through the complexity; this means centralization plays a stronger role in determining the creativity of the employees. According to these results, the linear regression equation for the fourth sub-hypothesis is as follows:

$$Y = 3.188 - (0.391) X_1 - (0.302) X_2 - (0.344) X_3$$

Thus for a unit of change in the centralization, formalization, and complexity, the creativity of the employees will change -0.39%, -0.30% and -0.34% respectively.

**5-3-6-Testing the fifth sub-hypothesis: there is a relationship between organizational culture and the employee’s creativity.**

To study this hypothesis, we refer to the tables 2 and 7.

	Significance level	Statistic t-values	Non-standardized $\beta$ values	standardized $\beta$ values
Fixes value	0.000	4.439	3.301	
Involvement	0.03	24.911	0.481	0.341
Consistency	0.00	9.161	0.123	0.101
Adaptability	0.01	18.988	0.467	0.301
Mission	0.00	19.328	0.335	0.309

Since in the regression and correlation matrix, the significance level is less than the error value (0.05), thus there is a significant relationship between the organizational culture (and its dimensions) and the employee’s creativity. The beta coefficients in Table 7 indicate that 34% of the changes in employee’s creativity are predicted through involvement in work, 10% are predicted through the consistency, 30% are predicted through the adaptability, and finally, 30% are predicted through the mission; this means the employee’s involvement in their work plays a stronger role in determining the creativity of the employees. According to these results, the linear regression equation for the fifth sub-hypothesis is as follows:

$$Y = 3.301 + (0.341) X_1 + (0.101) X_2 + (0.301) X_3 + (0.309) X_4$$

Thus for a unit of change in the involvement, consistency, adaptability and missions, the creativity of the employees will change 0.34%, 0.10% , 0.30% and 0.31% respectively.

**5-3-7-Testing the sixth sub-hypothesis: there is a relationship between organizational structure and organizational culture.**

To study this hypothesis, we refer to the tables 2 and 8.

	Significance level	Statistic t-values	Non-standardized $\beta$ values	standardized $\beta$ values
Fixes value	0.000	3.112	3.422	
Centralization	0.01	-17.568	-0.321	-0.333
Formalization	0.00	-8.124	-0.213	-0.313
Complexity	0.01	-26.554	-0.529	-0.381

Since in the regression and correlation matrix, the significance level is less than the error value (0.05), thus there is a significant relationship between the organizational structure (and its dimensions) and the organizational culture. The negative sign of the correlation coefficient in table 8 shows an inverse relationship between the organizational structure and the organizational structure. In addition, the standard beta coefficients indicate that 33% of the changes in organizational culture are predicted through centralization, 31% are predicted through the formalization and 38% are predicted through the complexity; this means the organizational structure complexity plays a stronger role in determining the organizational culture. According to these results, the linear regression equation for the fifth sub-hypothesis is as follows:

$$Y = 3.422 - (0.333) X_1 - (0.313) X_2 - (0.381) X_3$$

Thus for a unit of change in the centralization, formalization and complexity, the organizational culture will change 0.33%, 0.31% and 0.38% respectively.

#### 5.4. Testing the research hypotheses in structural equation model

After testing the hypotheses by regression and correlation tests, it is the time to use the SEM model to confirm the research hypotheses. SMART PLS 2 is a suitable tool to study SEM models as used in this research. The research hypotheses have been assessed in the section of the structural model. As shown in Fig. 3, all previous-mentioned conditions for the suitability of model fitness are true here again. Moreover, the relationship between the leadership style and the creativity is direct and significant; that means the leadership style has a significant and positive effect on the creativity, and as indicated by the standard output coefficients of the SMART PLS software, 67% of the changes in creativity are predicted by the leadership style. The available difference between this value and the resulted value of the regression test is due to the calculation of the measuring error that is calculated in SEM software and thus the causal coefficient is lower (more real). The output of the SMART PLS software confirms the sub-hypotheses as well as shown in table 9. When t-values at an interval higher than +1.96 and lower than -1.96, then we can see the significance of the relevant parameter. T-values of the table 9 show the significance of the relationships of the main and sub-hypotheses.

Hypotheses	Standardized coefficients	t-value	Result
Leadership style → Creativity	0.67	3.35	confirmed
Leadership style → Organizational culture	0.69	8.87	confirmed
Leadership style → Organizational structure	0.67	5.16	confirmed
Organizational culture → Creativity	0.62	3.08	confirmed
Organizational structure → Creativity	-0.53	9.16	confirmed
Organizational structure → Organizational culture	-0.37	6.97	confirmed
$\chi^2 = 144.21$ $df=61$ $RMSEA= 0.016$ $GFI= 0.93$ $A FI= 0.92$			

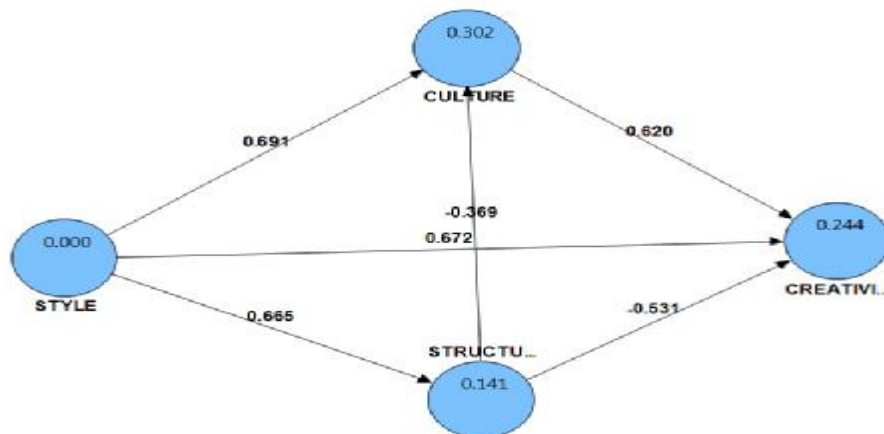


Fig. 3. Standardized coefficients of the structural model (PLS)

#### 5.5. Direct and indirect effects of the variables in the model



The structural part of the structural equation model shows the effects of the model's constructs in three types of effects: direct effect, indirect effect and total effect. The structural part of the model in the present study consists of one direct effect and two indirect effects. Table 10 shows the direction coefficients of the research.

Effects of the model		t coefficients	Effect value	Confirmation or rejection
Direct effect	Leadership style → Creativity	3.35	0.67	Confirmed
Indirect effect	Leadership style → Culture → Creativity	8.87	$0.69 * 0.62 = 0.43$	Confirmed
	Leadership style → Structure → Creativity	5.16	$0.67 * 0.53 = 0.36$	Confirmed
			$0.43 + 0.36 = 0.79$	

## 6. Conclusion and discussion

Nowadays, innovation is a fundamental need for the organizations that look for their survival and effectiveness, and many companies are now search for innovative and entrepreneurial ways and approaches for improving their effectiveness, efficiency, and flexibility. In this regard, now the creativity is promptly becoming a necessary tool for many organizations.

Organizational entrepreneurship is an attempt to create entrepreneurial mentalities and skills and to enter the features and mentalities into the culture and activities of the organization. According to the conducted researches and studies in the field of organizational entrepreneurship, we found out that variety of factors affect it, which creativity, leadership style, organizational structure and organizational culture have a significant role in organizational entrepreneurship. Let us discuss on the basis of the research hypotheses.

Main hypothesis: there is a relationship between the factors affecting organizational entrepreneurship.

In order to answer to the main hypothesis, which investigates the relationship between the factors affecting organizational entrepreneurship, the results of the sub-hypotheses were referred. Given that all sub-hypotheses were confirmed, the main hypothesis was also confirmed.

The first sub-hypothesis: There is a relationship between the manager's leadership style and the employee's creativity.

The findings showed that the relationship between the two variables of manager's leadership style and the employee's creativity is significant at 0.01 significance level ( $p = 0.000$ ;  $r = 0.718$ ). Therefore, it can be concluded with 99% confidence level that there is a significant and positive relationship between the manager's leadership style and the creativity of the employees of metal industry of Iranian Kaveh Industrial City. The direct relationship indicates that the change in the leadership style (transformational and transactional styles) will lead to change in the creativity of the employees. Additionally, the findings showed that in the relationship between the manager's leadership style and employee's creativity, the variable of the organizational structure organizational culture play a mediating role.

Transformational leaders create a suitable environment and so play a necessary and essential role in facilitating the innovative and creative activities and behaviors in the employees. These leaders help their followers to look their old problem from a new point of view. On the other hand, considering the characteristic of the intellectual stimulation (in which the leader helps the followers to come to initiatives and constructive creativities), it is expected that the transformational leadership facilitate the reinforcement of the culture of innovation and creativity in organization.

Transactional leadership has a reverse relationship with the creativity because the transactional leaders try to preserve the current situations, bureaucratic organizational structures, and established organizational structure none of which can lead to any change; thus these leaders have no effect on the improvement the culture that encourages creative behaviors among the employees.

The organization whose managers apply suitable leadership style can affect the creativity of its employees and nurture the new and fresh ideas, and these ideas in turn lead to the creativity and such creativity cause the organizational innovation and entrepreneurship. The results of the hypothesis is consistent with the findings of Shoghi and Mortezaei (2012), Ouqlou and Aolsou (2009), and Shoghi, Rezaei and Rezaei (2012).

The second sub-hypothesis: There is a relationship between the manager's leadership style and organizational structure.

The findings showed that relationship between the two variables of the manager's leadership style and the organizational structure is significant at 0.01 significance level ( $p = 0.000$ ;  $r = 0.702$ ). Therefore, with 99% confidence level we can conclude that there is a significant and positive relationship between the manager's leadership style and the organizational structure in metal industry of Iranian Kaveh Industrial City.

As the findings showed, the leadership style has a relationship with the organizational structure; the transformational leadership style has a positive relationship with the organizational structure; and the transactional leadership style has a negative relationship with the organizational structure. These findings indicate that in the transformational leadership style, the organic structure, formalization, complexity, and centralization are low, and in the transactional leadership style, the organic structure, formalization, complexity, and centralization are high.

Transformational leaders make the organizations form their organic structure and reduce their complexity through idealized influencing characteristics such as team work and make the employees participate in the important organizational decisions. One of the most important characteristics of the inspiring motivation of the transformational leadership that fits to the organic organizational structures is to welcome the changes. In organic organizational structures, the organizations welcome the changes because they know that there is an opportunity beyond each piece of the changes, and these opportunities will lead to the success of the organizations in the competitive markets. Moreover, the individual consideration emphasizes on the assigning of the authority to the employees, and such an assignment is a parameter that directly links to the centralization because through such a process, the employees will be able to decide on their own related works. All these facts illustrate that the transformational style of the leadership focuses on the external environment and flexibility.

Conversely, the transactional leaders look for preserving the current situation; they hate changes; they consider the needs of their followers just by focusing on the mutual transaction; they do not pursue the development of their employee's capabilities, and impose an intense control over their employees by applying active management-by-exception method. These facts show that the transactional leaders are willing to have mechanical organizations.

The results of this research are consistent with Macaux's findings (2009), while inconsistent with the findings of Haritha and Venkat (2004).

The third sub-hypothesis: there is a relation between the manager's leadership style and organizational culture. The findings showed that relationship between the two variables of the manager's leadership style and the organizational culture is significant at 0.01 significance level ( $p = 0.000$ ;  $r = 0.834$ ). Therefore, with 99% confidence level we can conclude that there is a significant and positive relationship between the manager's leadership style and the organizational culture in metal industry of Iranian Kaveh Industrial City. The direct relationship in the relationship between the manager's leadership style and organizational culture indicates that the change in the leadership style (transformational and transactional styles) will lead to change in the organizational culture.

The team-oriented organizational culture gives value to teamwork towards common goals so that the employees feel responsible for their work as well as their managers.

Idealized influence, as one of the transformational leadership's characteristics, lead to dissemination of team-building culture in the organization through partnership with employees for the group's benefit. Talking about the most important values, having a strong feeling towards objectives and becoming pattern leaders by the followers are the other characteristics of idealized influence, thus transformational leaders form the employee's identity and expectations in line with the organizational goals and lead to coordination and coherence among the employees through agreements and core values.

Transformational leaders motivate the followers to accomplish the organization's objectives through inspirational motivation with the expression of attractive vision and strategic orientations. Additionally, transformational leaders, as leaders of change, determine new visions of the organization, and persuade and encourage the followers continuously to accept new ideas and thoughts when there is a need to change the strategic objectives. In addition, taking a stance on controversial issues is another feature of inspiring leaders that make the members of the organization to agree on the significant disagreements.

Since learning in learning organizations occurs when the followers analyze the organization's issues, review the ways of doing works and find new and novel solutions to the problems, mental persuasion is a tool for the creation of learning organizations. Therefore, transformational leaders create a culture through mental

persuasion that supports changes and organizational learning. In addition, transformational leaders help their subordinates with fulfillment of their potential skills in order to increase their responsibilities in the organization. This leads to the employee's capabilities development. Eventually, they lead to the promotion of customer-oriented culture in the organization through paying attention to the customers as needs, abilities and aspirations owners that differ from each other.

Despite transformational leadership that led to improvement of the organizational culture, the results showed that transactional leadership have a reverse effect on the organizational culture. Because transactional leaders seek to maintain the status quo, hate to change, consider their follower's present needs through focusing on the process of mutual exchange and are not seeking to the development of the employee's capabilities. The results of this research are consistent with Ramanaidu (2011) and Nguyen (2010).

The fourth sub-hypothesis: There is a relationship between the organizational structure and the employee's creativity.

The findings showed that relationship between the two variables of the organizational structure and the employee's creativity is significant at 0.01 significance level ( $p = 0.000$ ;  $r = 0.672$ ). Thus with 99% confidence level it can be concluded that there is a significant and negative relationship between the organizational structure and the employee's creativity in metal industry of Iranian Kaveh Industrial City; that means when the organization is more flexible and steps toward the organic structure, the creativity will be increased; and conversely, when the organization moves toward the mechanical structures, the creativity will be decreased. Moreover, the results of the research showed that there is a significant and negative relationship between each of the complexity, formalization, and centralization on one hand and the creativity on the other hand.

Burns and Stalker (1962) and Mintzberg (1989) had shown that the organizational structures are effective on the creativity. They believed that the organic structure facilitate the creativity, while the mechanical structure prevent the creativity. According to Mintzberg, in mechanical structure, some issues such as the routine professional works, official instructions, close supervision on the basis of the rules and regulations, the exact hierarchy for the authority, and the official planning will block the minds of the employees because in such structures, the machines are more important than the humans, and so there is no room for the commitment and creativity of the employees. Thus, in the organizations with simple and organic structures, we can naturally find more creativity than the mechanical structures like the mechanical bureaucracy, professional bureaucracy, and independent department based organizations (Shoghi and Mortezaei, 2010).

In the organizations that have gone farther from the traditional level and approached to the modern organizational structures (such the network structures, star structures, etc.), there will be more attention to the changing and variable environment and the human resources. Self-confidence, self-controlling, independence, multiple skills, creativity, role-playing, flexibility, risk-taking, and entrepreneurial skills are among the characteristics that the modern organizations grant to their employees. Such organizations believe that if the organizational structure accepts the risks, then the individuals will be willing to try their risky ideas; and in such an atmosphere, the organization can nurture the creative people and reinforce their entrepreneurial motivations.

The results of this research are consistent with the findings of Shafizade and Shoghi (2012), and Dawson and Claudia (2009). Additionally, Shafiqi (2010) confirmed the negative relationship between the organizational structure and the creativity, and found that there is a negative relationship between the centralization and complexity of the organizational structure and the creativity, while there is no significant relationship between the formalization and creativity.

The fifth sub-hypothesis: There is a relationship between the organizational culture and the employee's creativity.

The findings showed that relationship between the two variables of the organizational culture and the employee's creativity is significant at 0.01 significance level ( $p = 0.000$ ;  $r = 0.702$ ). Thus with 99% confidence level it can be concluded that there is a significant and positive relationship between the organizational culture and the employee's creativity in metal industry of Iranian Kaveh Industrial City. The findings also showed that the involvement in work has the highest correlation with the employee's creativity between the dimensions of organizational culture; this means that steps toward further creativity of the employees can be taken through focusing on empowerment, team making and capabilities development.

Organizational creativity nowadays is required for any organization and organizations should provide necessary backgrounds. One of the most important factors in this field is organizational culture. Totally, organizations can increase their employee's creativity by agreement on the values and beliefs within the organization, adaptation to change, coordination in work, and aligning individual and organizational objectives. In addition, program

planners cannot establish the basis and criteria of the individual's creativity enhancement without considering organizational culture. Because, flourishing field of the potential capacity of the individual's creativity appears when the organization's culture accepts it. In fact, organizational culture is a key factor in enhancement or prevention of creativity and innovation. Organizational culture is known as a factor that affects all aspects of the organization, management tasks, and how to conduct and educate the employees.

As we know, continuous change process is essential for creativity. Hence, organizations with strong culture are able to create ways to meet changing needs, understand the organization's environment, answer to current stimulus and outrun future changes. Customers are the best and the most important factor for the introduction of organizations to the market changes, so organizations with customer domination culture understand the customers and answer to them and intend to provide the future through providing creativity and innovation in their products and services. Organizational learning is another factor influencing the organizational culture and can play an important role in the employee's creativity. Organizational learning measures the amount of peripheral symptoms that the organizations receive, translate and interpret, and the opportunities that the organizations provide for encouraging creativity, knowledge style and capabilities development.

According to Denison's model, organizational culture can be measured in two continuums of internal or external focus and stability or flexibility. Organizations with more focus on the external environment (vision, objectives and aims, strategic orientation and organizational learning) and more flexibility (capability development, team making, empowerment, change creation and customer orientation) own a culture that encourages creativity.

The results of this research are consistent with the findings of Arbioon, Azizi, Shoghi and Dehghan Najm Abadi (2012). In this regard, Castiglione stated that the flourishing field of the potential capacity of the individual's creativity appears when the organization's culture accepts it.

The fifth sub-hypothesis: there is a relationship between organizational structure and organizational culture.

The findings showed that relationship between the two variables of the organizational structure and organizational culture is significant at 0.01 significance level ( $p = 0.000$ ;  $r = -0.630$ ). Thus with 99% confidence level it can be concluded that there is a significant and positive relationship between the organizational structure and organizational culture in metal industry of Iranian Kaveh Industrial City.

The existence of the negative relationship expresses that there is a positive correlation between organic structure and organizational culture; and there is a negative correlation between mechanical structure and organizational culture. This means the movement of the organization toward organic structure leads to strengthen the organizational culture factors such as involvement in work, stability, adaptability and mission in the organization.

According to the Denison's model, organizational culture can be measured in two categories of internal or external focus and stability or flexibility. Organizations with more focus on the external environment and flexibility own organic structure and organizations with more focus on internal environment and stability own mechanical structure. Therefore, organic organizations have positive effect on the dimensions of organizational culture that are in relation with external focus and flexibility. Vision, objectives, aims, strategic orientation, capability development organizational learning, team making, empowerment, change creation and customer orientation are of these dimensions. Hence, organic structure helps in the cultural creation and reinforcement that focuses on external environment and flexibility.

Totally, it can be concluded that organic organizational structure helps in the creation of entrepreneurial culture. Entrepreneurial culture supports changes, flexibility, teamwork, organizational learning, customer orientation, etc.

The results of this research are consistent with the findings of Cordnaich, Moghimi, Ghanie and Yazdani (2009). Samoori (2000) also stated that with increasing centralization, complexity and formalization, the amount of individual autonomy, management support and guidance, risk taking, identity, variety of communications and entitlement to vote decreases.

Considering the results of the findings of this research the following suggestions can be proposed for the metal industry:

The main hypothesis of the research indicated that there is a relationship among the factors affecting organizational entrepreneurship. Accordingly, we suggest the followings:

- The top management of the organizations should have commitment to the organizational entrepreneurship. The top management of the metal industry should be sensitive to the concept of

entrepreneurship generally and to the organizational entrepreneurship particularly, and consider this as an important factor for survival and growth of the organization.

The first sub-hypothesis of the research indicated that there is a relationship between the manager's leadership style and the creativity of the employees. Accordingly, we suggest the followings:

- To train the managers on the different styles of leadership (i.e. transformational and transactional) and the importance of each style, because if the managers are familiar with the leadership styles, they can play role in growing the employee's creativity and finally lead to the entrepreneurship of the organization.
- To use their intellectual stimulation in order to challenge the thoughts, perceptions, and the creativity of their followers and to know their values and beliefs. This requires that the leaders train their followers to retest their traditional method of problem solving.
- To reform and revise the reward and encouragement system against the employees, because the rewards and encouragements will motivate the creativities

The second sub-hypothesis of the research indicated that there is a relationship between the manager's leadership style and the organizational structure. Accordingly, we suggest the followings:

- To decrease the centralization and increase the creativity by encouraging the teamwork and make the employees participate in decision-makings.
- To have a continual contact with the employees through unofficial communications

The third sub-hypothesis of the research indicated that there is a relationship between the manager's leadership style and the organizational culture. Accordingly, we suggest the followings:

- To provide an environment to avoid contradictions and confliction between the employees and various organizational units in order to help the empowerment and the employee's capability development
- To turn to team making and organizational learning for creating changes in order to customer orientation because the basis of competition is based on customer orientation
- The organization should align its employees with its objectives and long term strategies through dissemination of the statement that reflects the vision, mission, fundamental values and code of ethics of the organization

The fourth hypothesis of the research indicated that there is a relationship between the organizational structure and the employee's creativity. Accordingly, we suggest the followings:

- Small companies of the metal industry try to re-plan their structure and in such re-planning they have try to minimize their department and combine the department in each other, to outsource their projects, to remove additional departments, to decrease the levels of their hierarchy, and to flatten their structure.
- The organizations try to facilitate the vertical communications, especially with the top managers of the company, so that the employees can offer their suggestions to the managers at the soonest possible time without any official bureaucracy. To fulfill this objective, the companies can assign a box or email for the suggestions of the employees so that the manager of the organization can directly check their suggestions.
- To invite all employees to participate in decision-makings because the participatory environment can lead to more creativity and innovation and it can help the employee's growth. To do this, the managers can officially confer some authorities to the qualified employees. Of course, such an action will not reduce the responsibilities against the probable problems.

The fifth hypothesis of the research indicated that there is a relationship between the organizational culture and the employee's creativity. Accordingly, we suggest the followings:

- To use management by objective in planning and goal setting, so the employees can be aware of the overall goals of the organization, and their participation and sense of responsibility increase in order to achieve the objective
- To implement knowledge management system in the organization and use novel and applicable plans in the field of knowledge management such as storytelling in the organization
- To avoid adhering to traditional methods and views, and evaluate these methods and procedures continuously in order to adapt to the external environment in a dynamic manner

The sixth hypothesis of the research indicated that there is a relationship between the organizational structure and the organizational culture. Accordingly, we suggest the followings:

- To take steps to decrease concentration and increase creativity in order to empower the employees
- To create work teams that their members are from different organizational units, because this leads to reduce the complexity of the organizational structure

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