

Study of Factors Affecting Human Resource Empowerment to Enhance Productivity (Case Study: Sistan Cement Factory)

Arsham Honarkar Ashena, Abolfazl Keikha

MS.c student of Industrial Engineering, Islamic Azad University of Zahedan, Iran

Received: January 27, 2015

Accepted: March 31, 2015

ABSTRACT

Paying attention to productivity in manufacturing processes is of importance and human resources constitute the most important factor in productivity. Organizations can improve productivity by empowering employees. There are two types of mechanical and organic approaches to empowerment of personnel. This study examines the relationship between empowerment five factors (sense of competency, self-organization, self-efficiency, meaningfulness and trust) and the factors of productivity of human resources (organizational commitment, job satisfaction, organizational involvement and job creativity) in the cement factory in Sistan. The population of the study is all of the Sistan cement factory personnel (159), 113 of whom were selected through a stratified random sampling, and empowerment questionnaire was distributed among them, the content and face validity of which were approved by the professors and expert and the reliability was calculated as 0.86 by Cronbach's alpha coefficients and for data analysis and hypothesis testing, t-test group statistical tests and Friedman's were used with the help of SPSS software. The results of this study show that from the perspective of Sistan cement factory personnel, all the five dimensions of empowerment mentioned are effective in raising the productivity of human resources. Also according to the Friedman test results, the personnel believe that the effect and the priority of the five aspects of empowerment on human resources productivity in Sistan cement factory are the same and one must pay equal attention to all dimensions.

KEYWORDS: Empowerment, competency, self-organization, efficiency, meaningfulness and trust, productivity

1. INTRODUCTION

Today, organizations have to be run in the highly competitive environments, with surprising developments. In this condition, the managers do not have much opportunity to control the employees and should spend most of their time and effort on identifying the internal and external environments of the organization and have other staff to undertake the daily tasks. The employees are able to cope well with the duties when they have the required skills, knowledge and abilities and know well about the organization goals. The tool which can help the managers in this regard is the process of empowerment. (Abdullahi et al., 2006). Training of skilled workers and experts is the most important factor in the success of any organization faced with environmental changes (Sharifzadeh and Mohammadi Moghaddam, 2009). Empowering of the human resources by freeing up the internal forces of the personnel, providing the backgrounds and creating the opportunities to flourish their talents, cause a positive attitude in the personnel toward the job and the organization. Also changes in the beliefs and thoughts of the human resources make it easy for the personnel to believe that they have the required capability and competency to perform the tasks successfully and have the ability to influence and control over the business results. Furthermore, they feel that they follow significant and valuable career goals and they are treated honestly and fairly (Abdollahi and Nave Ebrahim, 2006). Today, organizations are under a lot of pressure because they are influenced by factors such as increased global competition, rapid changes, the need for quality, after sales services and limited resources. If an enterprise wants to be a leader in its business and not fall behind the competition must have skilled, creative and highly motivated manpower. Human resources constitute the real wealth of the organization. There is a direct relationship between human capital and productivity in organizations. The concerns of the world's most successful businesses are gathering educated and wise human capital who is able to change the organization to which they belong (Mohammadi, 2002).

Managers to be able to improve their organization's performance should see the organization from a qualitative perspective and try to maintain the quality of work performance of his subordinate organization in the desired level by providing executive strategies. Every program based on the employee empowerment can lead to efficiency and can bring more production, better services, attracting customers and finally taking a larger share of the market

* **Corresponding Author:** Arsham Honarkar Ashena, MS.c student of Industrial Engineering, Islamic Azad University of Zahedan, Iran a.honarkar@gmail.com

(Babaei et al., 2002). Modern and effective technical empowerment to improve the productivity of the organization is by using the power of the employees. Staffs, by the knowledge, experience and motivation they have, hold a hidden power and empowering is actually freeing up this power. This technique offers the potential capacities for utilization of human capabilities and in an organizational healthy environment suggests a balanced method between control by the manager and latitude of the staffs. (Azarinia, 2010).

This research continues in the second part of the research with the literature and literature review, in the third part with the methodology of the research, in the fourth part it deals with data analysis and hypothesis testing and in the final section with conclusions and offering suggestions.

2-LITERATURE AND LITERATURE REVIEW

2-1-Research Literature

Empowerment of Human Resources

In the 1950s, the management scientific resources were full of recommendations for managers to behave their staff friendly. In the 1960s, managers should be sensitive to the needs and motives of the staffs; in the 1970s, managers should ask the staffs for help and in the 1980s, managers should form the groups and hold the meetings (Shahrani et al., 2007) and in the 1990s, empowerment and its relevant managerial and organizational factors attracted the attention and interest of many researchers and many involved in the management and organization.

For Kangar and Kanango (1888), empowerment means to provide the necessary resources available to staff as well as to strengthen the feeling of being important in them. Blanchard et al (2003) state empowerment means reinforcement and this means, to help people improve their self-confidence, dominate their disability and inability and create enthusiasm in people for doing activities and mobilize their intrinsic motivations to perform the duties. In other words, empowerment is the reinforcement of beliefs, increase of knowledge and skills, improvement of the psychological features of staffs and improvements of organizational and environmental conditions in a way that people be able to work in the organization with maximum efficiency and efficacy (Bakhtiari and Ahmadi Moghaddam, 2010).

Benefits and achievements of the implementation of empowerment in the organization

Generally, the benefits of using empowerment can be divided into two categories:

Organizational benefits: improving the economic performance of the organization.

Individual benefits: the employees with their capabilities increased, experience less conflict and ambiguity in their job duties due to the clarity and obviousness of the duties and have more control over their work environment (Pits, 2005).

Approaches and models of employee empowerment

The process of strengthening human resources was earlier regarded as delegation, business development and participation in decision making and the organizations would have thought that at a time when cost reduction and competitiveness are the sustainable competitive strategies, this cost reduction must be done through increased responsibilities of the staffs (Grove, 1971). Since 1990s, theorists and experts in organizational psychology, assumed empowerment as a multidimensional concept which does not only include transferring the authority and power of decision making from the superior manager to the lower level staffs. They considered it from the perspective of the staffs beliefs and feelings. (Thomas & Velthouse, 1990).

In general, in reviewing the literature on empowerment, there are two kinds of attitudes that will be discussed:

1. The structural approach (mechanical)

According to this approach, empowerment means transferring the authority and power to the lower level staffs. Empowerment is a process through which the senior manager develops a clear vision and provides programs and tasks to employees and allow them to do procedural changes and processes modification if needed. This view refers to a kind of "Communicative Approach" (Quinn and Spreitzer, 1997).

Psychological Approach (organic)

In this approach, the condition and features of the organization and managerial measures are not meant to be empowering, but are the underlying of human resources empowerment. The basic assumption of this approach is that the empowerment of human resources is rooted in the people's motivational needs which involve the staffs' perception and conception toward their role in the organization. The structural approach is not perfect, because the management activities for empowerment will have little impact on the employees (Kangar and Kanango, 1988).

The Dimensions of Psychological empowerment

According to the researchers' studies, the psychological empowerment has five dimensions as follows:

1. **Sense of meaningfulness**
Being meaningful is the opportunity that people feel they are pursuing important and valued career goals, in the sense that they feel they are moving on a road that is worth their time and energy (Appelbaum & Hongger, 1998).
2. **The sense of competency (self-efficacy)**
Competency or self-efficacy is one's belief on his abilities and capabilities for doing his tasks skillfully. These individuals feel that they can perform their duties with a high level of skills (Thomas & Velthouse, 1990).
3. **Sense of self organization (self-governance)**
Self-governance, self-determination, self-organization, independence and having the right of selection, refer to the meaning of freedom and independence of the individual in determining the necessary activities to perform job duties (Thomas & Velthouse, 1990).
4. **Sense of efficiency**
Efficiency is the extent to which the person has the ability to influence the strategic, administrative and operational outcomes in his own work. The individuals in whom the sense of efficiency is strong do not believe in the limitation of their own abilities by the external obstacles, but they do believe that one can control those barriers (Spreitzer, 1995).
5. **Sense of Trust**
The capable individuals have a sense called trust, they are confident that they will be treated fairly and equally. These individuals maintain this confidence that even in a subordinate position, the end result of their works, will be justice and peace (Cameron and Veten, translated by Owrei Yazdani, 2002: 33).

Productivity

Productivity has been of always dynamic words which has always been in the exposure of evolution and change in the history. As in the path of excellence and perfection of human knowledge in the social and economic issues, the form and content of productivity changed and the newer and more complete definitions have been provided in the direction of the evolution and the development. In this way and due to this process, it is required to have a brief review of the concepts of efficiency and efficacy and mention its distinguishing features with the concept of productivity and then express the concept of productivity, before examining the concept and definition of productivity and the process of its development (Ansari, 2006).

Efficiency

In many cases, the same concept applies to productivity and efficiency and they are defined as useful efficiency ratio (output) to the input. The United States encyclopedia in 1980, know efficiency as an equivalent for effectiveness and defined it as "the capacity to produce desired results with a minimum consumption of energy in time, money, materials and etc." Joseph Prokoniko in the book *Productivity Management* (1987) says that efficiency is the production of high quality products in the shortest time possible.

Effectiveness

Effectiveness includes the degree of achieving the set objectives. This concept in contrast to efficiency is the indicator of goals realization procedure and its assessment. So how to realize a set of goals is indicative of effectiveness. While how to use the resources to achieve these goals is the demonstration of efficiency. Productivity is a combination of efficiency and effectiveness; because effectiveness is associated with the operation, while efficiency is associated with the beneficial use of resources. In fact, the efficiency is a feature that if the production or operating system owns it, it will stop wasting time and energy and the output will be produced with better quality. It is true that productivity is based on the concept of efficiency, but it has gone beyond it and has got the broader economic and social dimensions (Ansari, 2006).

Extensive research and studies have been done on the productivity and various concepts have been provided by economics scholars, sociologists, international institutions and organizations. In the following, while we present some examples of these definitions, the concept and history of productivity will also be discussed.

According to the definitions of efficiency and effectiveness, productivity is the relationship between the quantity (volume or value) of an amount of production and one or more or all of the factors that have been used to obtain that amount of production. In fact, this relationship gives a criterion of the efficiency of the factor or mentioned factors and is the mathematical relation of productivity. In this relationship, maximizing the use of resources, human force, facilities and etc., through scientific method, reduction of production costs, markets expansion, employment increase

and efforts to increase real wages and improving living standards, as they be for the benefit of employees, management and society, must be implied (Tavari et al., 2008).

Necessity of Attention to Human Resource Productivity

Paying attention to the productivity factor, especially human resources productivity, as the most fundamental and the most strategic resource of every society, human resource productivity and organization of the society, leads to the development and growth of societies and organizations and will create a better quality of life (Taheri, 2008).

Factors affecting the productivity of human resources

Whiskey and Kopner (2006) propound the influence of productivity of human resources in the world today as a fact and say that things that can contribute to this fact are: the nature of job and character of the people (the appropriateness of job and the employed), motivation (material and spiritual), job awareness and recognition, job satisfaction, quality of working life and individual participation in the organization activities, the importance of staff to senior managers, rather than only giving importance to the work and finally fair treatment with the individuals.

2.2 Background of the study

Considerable studies have been done on the general subject of empowerment and productivity, and each of them dealt with them from different perspectives. Samadi and Suri (2011), using the model of Thomas and Velthos, examined the effect of empowering on the performance of the staff of the General Office of Cooperation of Hamadan province, and showed that the more the staffs have these feelings of empowerment, the better performance they will have. Bakhtiari and Ahmadi Moghadam (2010) also studied the role of managerial strategies, focused on determining the degree of this role on the managers' empowerment. Rezaei and Farahbod (2010), using the model of Thomas and Velthos, showed that the effect of the levels of management strategies are different on the psychological empowerment of tax staffs of Gilan province.

Yazdani and Et al. (2009) by investigating and analyzing the effective factors on the staffs' empowerment and introducing its improvement strategies in Sistan Baloochestan University, have proposed job enrichment, delegation, performance-based bonuses, collaborative management, the offers system, formation of work teams and participation in the goal programming, as the main means of empowerment. Emam Gholizadeh and Et al., (2009) also by using the model of Thomas and Velthos, investigated the relationship between the degree of staffs' participation in the organization decisions and their empowerment in the telecommunication company of Mazandaran province and the research results showed that there is a significant relationship between the staffs' participation in the organization decisions and their empowerment.

Teimoornejad and Sarihi (2010), by examining the impact of organizational learning on the psychological empowerment of the staffs of the Ministry of Economic Affairs and Finance, showed that psychological empowerment can be a basis for developing the human resource appropriate strategies in the field of organizational learning and employee psychological empowerment. Light (2010) to explain the relationship between involvement, empowerment and satisfaction in 100 industrial companies, started to study the relation and engagement outcomes, empowerment and employee satisfaction based on the job type. His research results showed that managers are more satisfied than other working groups and hourly employees were less satisfied than other occupational groups. Sanderson (2008) by studying the relationship between empowerment and intentions of job desertion in a structured environment (evaluation of Naval Medical Services), found that a leader-follower relationship is the most important predictor factor for psychological empowerment. Agnely and Et al. (2007) examined the psychological empowerment and its relationship with trust to direct managers of Turkish banks; their research result showed that there is a direct and significant relationship between trusting the managers based on cognition and psychological empowerment.

3. RESEARCH METHODOLOGY

Concerning the importance of productivity and empowerment of human resources, the effect of empowerment on the productivity of human resources in Sistan cement factory is examined in this research. The main purpose of this survey is to evaluate the effect of empowerment on the productivity of human resources. In the direction of achieving the main objective, the secondary objectives include the impact of each dimension of empowerment (sense of competency, sense of self-organization (self-governance), sense of efficiency, sense of meaningfulness and sense of trust) on the productivity of human resources. Also the priority of these dimensions from their effect on the productivity of human resources point of view is considered.

To achieve the desired goals, two major and minor hypotheses are formulated:

The main hypothesis:

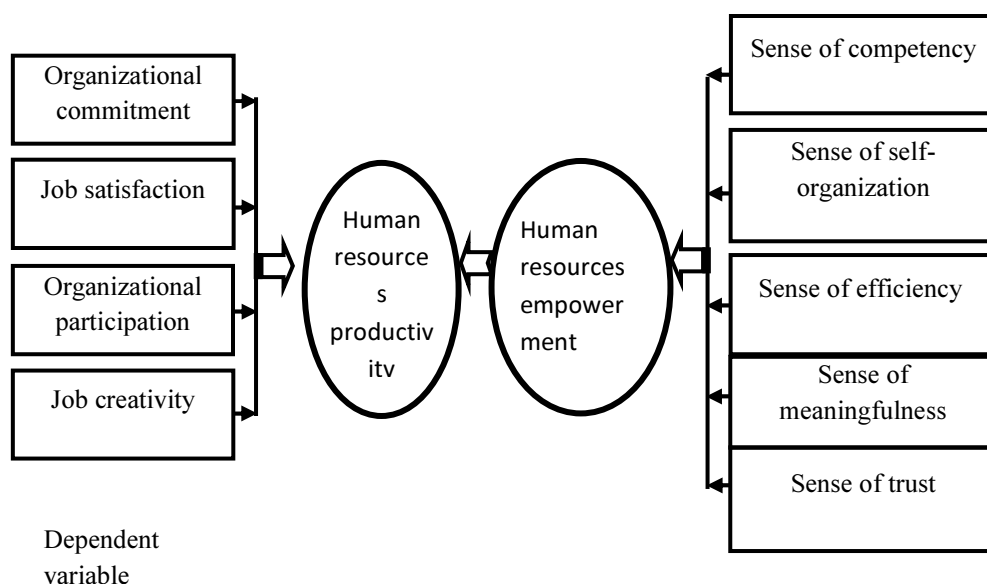
- Empowerment of the staffs affects the productivity of human resources in Sistan cement factory.

The secondary hypotheses:

1. Sense of competency as a dimension of staffs' empowerment affects the human resources productivity in Sistan cement factory.
2. Sense of self-organization (self-governance) as a dimension of staffs' empowerment affects the human resource productivity in Sistan cement factory.
3. Sense of efficiency as a dimension of staffs' empowerment affects the human resources staff productivity in Sistan cement factory.
4. Sense of job meaningfulness as a dimension of staffs' empowerment affects the human resources productivity in Sistan cement factory.
5. Sense of trust as a dimension of staffs' empowerment affects the human resources productivity in Sistan cement factory.
6. The impacts of the quintet dimensions of staffs' empowerment on the human resources productivity in Sistan cement factory have the same priority.

Conceptual model of research:

According to the measures and components studied in this research, the general model of the present research is as model (1):



Model 1: conceptual model of the research

It should be noted that in this research, human resources productivity is generally considered and the impact of each of its components with dimensions of empowerment are not analyzed and examined separately; because otherwise, the number of hypotheses will increase and they will not reasonably fit.

Research domain:

In this research, the effect of empowerment on the human resources productivity in Sistan cement factory is discussed. This effect is by considering the five dimensions of the staffs' empowerment (sense of competency, sense of self-organization (self-governance), sense of efficiency, sense of meaningfulness and sense of trust) on productivity (including the four components of organizational commitment, job satisfaction, organizational participation and job creativity).

The domain area of this research is Sistan cement factory located in the city of Zabol (Sistan and Baloochestan province). Information about this research is related to September 2012 to March 2013.

Research Methodology, Society and Statistical Sample:

The present research method is applied research type in terms of the research purpose, and descriptive-survey type in terms of data collection. After collecting the literature of the subject through library method, the psychological approach was chosen from the employee empowerment approaches. This approach considers the person's attitude and his understanding of work and his working environment, as a criterion for his empowerment and has five dimensions. Regarding the staffs' productivity, after survey and studies were carried out using a library method, the four mentioned components were selected in the conceptual model of the research.

To collect data to test and evaluate the research hypotheses, a questionnaire was used.

In fact, the questionnaire was used to measure the effect of psychological empowerment dimensions on the staffs' productivity and the questions have been formed so that they assess the effect on the four dimensions of human resources productivity.

The target population of the survey includes all personnel and manpower of Sistan cement factory which were chosen by using a stratified random sampling and the questionnaires were distributed among them (and the data were analyzed and studied using descriptive and inferential statistical methods.

Tools and methods of data collection:

In order to collect data to test and evaluate the research hypothesis in this research, psychological empowerment questionnaire with five dimensions of sense of competency, sense of self-organization (self-governance), the sense of efficiency, sense of meaningfulness and sense of trust is used. Spritzer(1992) presented this questionnaire with 16 questions and then Veten and Cameron added the dimension of trust and four related questions and the final questionnaire with 20 questions and five dimensions based on the Likert scales (very high to very low) was designed and set. In this research, to assess each dimension effect on the human resources productivity, the questions of empowerment questionnaire with the five mentioned dimensions were asked as to fulfill the research aim. Also for content and face validity, the mentioned questionnaire was given to a number of professors and experts and after receiving their feedback and applying the expert opinions, its validity was confirmed.

To confirm the reliability, 20 questionnaires were given to the members of the sample and after the collection and analysis of responses, Cronbach's alpha coefficient of 0.86 was obtained, thus its reliability confirmed. Also to convert ordinal scales of the questionnaire to the distance scale, to perform statistical tests and hypotheses analysis, a number was allotted to each of the options as described by table (1) and analysis was performed based on these numbers.

Table 1. Converting the rating scale to distance scale

Very low	Low	Moderate	High	Very high
1	2	3	4	5

The structure of the mentioned questionnaire was formed with 6 general questions and 20 questions to measure 5 secondary hypotheses related to the effect of empowerment dimensions on the productivity of human resources. Information related to the questions of each empowerment variable and productivity of human resources is as described in table (2):

Table 2. Relationship between questions with empowerment dimensions and the research variables

No. of questions	Measured variable	No.
4-3-2-1	Sense of competency	.1
8-7-6-5	Sense of self-organization (self-governance)	.2
12-11-10-9	Sense of efficiency	.3
16-15-14-13	Sense of meaningfulness	.4
20-19-18-17	Sense of trust	.5

4. The method of data analysis and hypothesis testing

In this research, to describe the collected data, a variety of statistical indicators such as frequency, descriptive statistics and graphs were used. To determine the effect or lack of effect of the independent variable on the dependent variable, parametric one-sample t-test was used in SPSS software. It should be noted that because the sample sizes is big, it is assumed as normal and the parametric tests were used.

After running the test, concerning the observed significance level, the null hypothesis (no effect of the independent variable on the dependent variable) can be either rejected or accepted. In fact, if the significance level is less than 0.05, the null hypothesis will be rejected and the effectiveness of empowerment dimensions on

productivity will be confirmed. In the following, to determine the priorities for the effectiveness of empowerment dimensions on the human resources productivity using the Friedman test, the variables were prioritized.

Testing the research hypotheses:

In this section, the research hypotheses are analyzed using one-sample t-test. Also to response the desired aim in the variables ranking based on the five dimensions of empowerment and their impact on human resources productivity, Friedman test is used. The research hypotheses evaluate the effect of empowerment dimensions on the productivity in terms of employee attitudes and based on the stated questionnaire. After collecting, quantifying and entering the answers in the SPSS software, the mean of the given responses to the desired components was calculated.

The effect of staffs' sense of competency on the human resources productivity

- Sense of competency, as one of the dimensions of the staffs' empowerment affects the productivity of human resources in Sistan cement factory.

Null hypothesis, alternative hypothesis and the hypothesis test results are reviewed below and in the table (3):

$$\begin{cases} H_0: \mu < 3 \\ H_1: \mu \geq 3 \end{cases}$$

Table 3. The results of one-sample t-test for secondary hypothesis (1)

Variable	Number	Mean	Standard Deviation	t-statistic	Degree of freedom	Significance level
The effect of sense of competency on productivity	113	4.40	0.46	32.62	112	0.001

Test value=3

The results in Table3 indicate that the mean and standard deviation of respondents of the impact of the competency on human resource productivity are 4.40 and 0.46 respectively which is bigger than the assumed t-value (which is considered 3) and the t-statistic is 32.62, which is significant at the 99% level; ($t = 32/62$, $df = 112$, $P < .1.1$).

Therefore, the null hypothesis is rejected and the alternative hypothesis is confirmed; this means that from the perspective of Sistan Cement Factory staffs, sense of competency as one of the dimensions of staffs' empowerment affects the human resources productivity in Sistan cement factory.

The effect of staffs' sense of self-organization (self-governance) on the productivity of human resources

- The sense of self organization (self-governance) as one of the dimensions of staffs' empowerment affects the productivity of human resources in Sistan cement factory.

To answer the above secondary hypothesis, the null hypothesis, alternative hypothesis and the test results are in the table 4:

$$\begin{cases} H_0: \mu < 3 \\ H_1: \mu \geq 3 \end{cases}$$

Table 4. The results of one-sample t-test for the secondary hypothesis (2)

Test value=3						
Variable	Number	Mean	Standard Deviation	t-statistic	Degree of freedom	Significance level
The effect of sense of self-organization (self-governance) on productivity	113	4.35	0.64	22.34	112	0.001

The results in Table 4 indicate that the mean and standard deviation of respondents of the impact of the sense of self-organization (self-governance) on human resource productivity are 4.35 and 0.64 respectively which is bigger than the assumed t-value (which is considered 3) and the t-statistic is 22.34, which is significant at the 99% level; ($t = 22/34$, $df = 112$, $P < .1$).

Therefore, the null hypothesis is rejected and the alternative hypothesis is confirmed; this means that from the perspective of Sistan Cement Factory staffs, sense of self-organization (self-governance) as one of the dimensions of staffs' empowerment affects the human resources productivity in Sistan cement factory.

The effect of staffs' sense of self-efficiency on the productivity of human resources

- The sense of self-efficiency as one of the dimensions of staffs' empowerment affects the productivity of human resources in Sistan cement factory.

Null hypothesis, alternative hypothesis and one-sample t-test results for answering the secondary hypothesis above, are provided below and Table (5):

$$\begin{cases} H_0: \mu < 3 \\ H_1: \mu \geq 3 \end{cases}$$

Table 5. The results of one-sample t-test for the secondary hypothesis (3)

Test value=3						
Variable	Number	Mean	Standard Deviation	t-statistic	Degree of freedom	Significance level
The effect of self-efficiency on productivity	113	4.31	0.65	21.58	112	0.001

The results in Table 5 indicate that the mean and standard deviation of respondents of the impact of the sense of self-efficiency on human resource productivity are 4.31 and 0.65 respectively which is bigger than the assumed t-value (which is considered 3) and the t-statistic is 21.58, which is significant at the 99% level; ($t = 21/58$, $df = 112$, $P < .1$).

Therefore, the null hypothesis is rejected and the alternative hypothesis is confirmed; this means that from the perspective of Sistan Cement Factory staffs, sense of self-efficiency as one of the dimensions of staffs' empowerment affects the human resources productivity in Sistan cement factory.

The effect of staffs' sense of meaningfulness on the productivity of human resources

- The sense of job meaningfulness as one of the dimensions of staffs' empowerment affects the productivity of human resources in Sistan cement factory.

Null hypothesis, alternative hypothesis and the test results for answering the desired hypothesis, are provided below and Table (6):

$$\begin{cases} H_0: \mu < 3 \\ H_1: \mu \geq 3 \end{cases}$$

Table 6. The results of one-sample t-test for secondary hypothesis (4)

Test value=3						
Variable	Number	Mean	Standard Deviation	t-statistic	Degree of freedom	Significance level
The effect of job meaningfulness of productivity	113	4.37	0.50	28.98	112	0.001

The results in Table 6 indicate that the mean and standard deviation of respondents of the impact of the job meaningfulness on human resource productivity are 4.37 and 0.50 respectively which is bigger than the assumed t-value (which is considered 3) and the t-statistic is 28.98, which is significant at the 99% level; ($t = 28/98$, $df = 112$, $P < .1$).

Therefore, the null hypothesis is rejected and the alternative hypothesis is confirmed; this means that from the perspective of Sistan Cement Factory staffs, sense of job meaningfulness as one of the dimensions of staffs' empowerment affects the human resources productivity in Sistan cement factory.

The effect of staffs' sense of trust on the productivity of human resources

- The sense of trust as one of the dimensions of staffs' empowerment affects the productivity of human resources in Sistan cement factory.

To answer the above hypothesis, null hypothesis, alternative hypothesis and the test results, are provided below and Table (7):

$$\begin{cases} H_0: \mu < 3 \\ H_1: \mu \geq 3 \end{cases}$$

Table 7. The results of one-sample t-test for secondary hypothesis (5)

Test value=3						
Variable	Number	Mean	Standard Deviation	t-statistic	Degree of freedom	Significance level
The effect of sense of trust on productivity	113	4.42	0.46	33.07	112	0.001

The results in Table 7 indicate that the mean and standard deviation of respondents of the impact of sense of trust on human resource productivity are 4.42 and 0.46 respectively which is bigger than the assumed t-value (which is considered 3) and the t-statistic is 33.07, which is significant at the 99% level; ($t = 33.07$, $df = 112$, $P < .1$).

Therefore, the null hypothesis is rejected and the alternative hypothesis is confirmed; this means that from the perspective of Sistan Cement Factory staffs, sense of trust as one of the dimensions of staffs' empowerment affects the human resources productivity in Sistan cement factory.

The effect of staffs' empowerment on the productivity of human resources

- Staffs' empowerment affects the productivity of human resources in Sistan cement factory.

Null hypotheses, alternative hypotheses and the analytical results are provided in Table (8):

$$\begin{cases} H_0: \mu < 3 \\ H_1: \mu \geq 3 \end{cases}$$

Table 8. Results of one-sample t-test for the main hypothesis of the research

Test value=3						
Variable	Number	Mean	Standard Deviation	t-statistic	Degree of freedom	Significance level
The effect of empowerment on productivity	113	4.37	0.42	34.53	112	0.001

The results in Table 8 indicate that the mean and standard deviation of respondents of the impact of empowerment on human resource productivity are 4.37 and 0.42 respectively which is bigger than the assumed t-value (which is considered 3) and the t-statistic is 34.53, which is significant at the 99% level; ($t = 34.53$, $df = 112$, $P < .1$).

Therefore, the null hypothesis is rejected and the alternative hypothesis is confirmed; this means that from the perspective of Sistan Cement Factory staffs, staffs' empowerment affects the human resources productivity in Sistan cement factory.

Prioritization of dimensions of staffs' empowerment in terms of their effect on the productivity of human resources

- Quintet dimensions of staffs' empowerment have the same priority in affecting the productivity of human resources in the Sistan cement factory.

Null hypotheses, alternative hypotheses and analytical results related to this hypothesis are provided in Table (9):

H0: the effect and the priority of quintet dimensions of empowerment on human resources productivity are the same in Sistan cement factory

H1: at least two dimensions have different effects and priority

Table9. Friedman test results for secondary hypothesis(6)

Variable	Rank mean	Number	χ^2 -statistic	Degree of freedom	Significance level
The effect of competency on productivity	3.00	113	3.26	4	0.52
The effect of self-organization (self-governance) on productivity	3.02				
The effect of self-efficiency on productivity	2.89				
The effect of job meaningfulness on productivity	2.91				
The effect of trust on productivity	3.19				

According to Friedman test results which are provided in the table (9), the observed significance level is 0.52 and is larger than the considered error ($\text{Sig.} > 0.05$) and therefore, the alternative hypothesis is rejected and the null hypothesis is confirmed; which means that the claim of equal effects and priorities of the five dimensions of empowerment on the productivity of human resources in Sistan cement factory is accepted. In fact, according to the statistics and significance levels, none of the five dimensions of empowerment, have different and superior preference and priority in terms of impact on the productivity of human resources from each other and thus the desired hypothesis is confirmed. It is also essential to note that according to the observed rank mean in the table, sense of trust is of greater importance and sense of self-efficiency is of less importance but these dimensions do not have huge differences from each other and in general they do not have different impacts on the productivity of human resources. This aspect is also confirmed by statistics and this column only shows the descriptive statistics.

5-CONCLUSION

After data collection and their analysis by statistical tests, it was found that each of the five dimensions of empowerment including sense of competency, self-organization, self-efficiency, meaningfulness, and trust do not have different and superior preference and priority in terms of affecting on the productivity of human resources. Mean of responses to the impact of sense of competency on the productivity of human resources is equal to 4.40; this means that, from the perspectives of Sistan cement factory staffs, sense of competency as one of the dimensions of staffs' empowerment, affects the human resources productivity in Sistan cement factory. Mean of responses to the impact of sense of self-organization (self-governance) on the productivity of human resources is equal to 4.35; this means that, from the perspectives of Sistan cement factory staffs, sense of self-organization (self-governance) as one of the dimensions of staffs' empowerment affects the human resources productivity in Sistan cement factory. Mean of responses to the impact of sense of self-efficiency on the productivity of human resources is equal to 4.31; this means that, from the perspectives of Sistan cement factory staffs, sense of self-efficiency as one of the dimensions of staffs' empowerment affects the human resources productivity in Sistan cement factory. Mean of responses to the impact of sense of job meaningfulness on the productivity of human resources is equal to 4.37; as a result it can be said that, from the perspectives of Sistan cement factory staffs, sense of job meaningfulness as one of the dimensions of staffs' empowerment affects the human resources productivity in Sistan cement factory. The mean of the research sample for the impact of trust on the productivity of human resources is equal to 4.42; this means that from the perspective of Sistan cement factory staffs, sense of trust as one of the dimensions of staffs' empowerment affects the productivity of human resources in this factory. The investigations also revealed that the main hypothesis was confirmed; this means that, from the perspective of Sistan cement factory personnel, personnel's empowerment affects the productivity of human resources in this factory.

Finally, according to Friedman test results, it was found that the claim of equality of effects and priorities of the five dimensions of empowerment on the productivity of human resources in Sistan cement factory is accepted. In fact,

according to the statistic and significance level, none of five dimensions of empowerment, have different and superior preference and priority from each other in terms of their effects on the human resources productivity and therefore, the desired hypothesis is confirmed.

REFERENCES

- [1] Azari nia, Mohammad Ali. (2010). Employee empowerment, the key to increase productivity, Chatr monthly journal, internal publication of Parsian Insurance Company, Number Twenty Nine, p. 7
- [2] Owrei Yazdani, BadrAddin, Noormohammad Yaqubi and Ebrahim Sami Poor Giri. (2009). Analysis of factors affecting employee empowerment and introducing their improvement strategies, human resources, No. 6, pages 50-60
- [3] Babai, Ali Akbar et al. (2002). Staffs; empowerment: alternative investment, Tadbir magazine, No. 129, p 87
- [4] Bakhtiari, Hassan and Esmaeil Ahmadi Moghaddam. (2010). The role of management strategies to managers' empowerment, Police Management Studies journal, fifth year, No. 1, pages 39-53
- [5] Samadi, Abbas, Suri, Mehrdad. (2010). The effect of empowerment in the performance of General Cooperation office of Hamedan Province, Economics, No. 1, 143- 157
- [6] Blanchard, Kenneth. (2000). Three keys of empowerment, translated by fazlollah Amini, Tehran: Fara Publication
- [7] Blanchard, Kenneth. (2002). Management of Employees Empowerment, translated by Mehdi Iran Nejad Parizi, Tehran: Modiran Publication
- [8] Saatchi, Mahmoud (2006), Psychology of Productivity, Tehran, Virayesh Publication
- [9] Abdullahi, Bijan and Nave Ebrahim, Abdurrahim (2006). Empowerment of Personnel, the golden key of human resource management. Tehran: Edition.
- [10] Sharifzade, Fattah and Mohammadi Moghaddam Yousef (2009). The relationship of empowerment of employees and human resources productivity of Police Command Staffs of Lorestan Province. Police Management Studies journal/ forth year, No. 1: 7-19
- [11] Mohammadi, Mohammad. (2002). Employee empowerment programs. Management Studies, No. 35-36; Allameh Tabatabaei University.
- [12] Shahrani, Abbas and Hassan Zadeh, Mohammadsadegh (2007). The impact of organizational culture on employee empowerment. Tehran, Article collection of Empowerment Conference
- [13] Bakhtiari, Hassan and Ahmadi Moghaddam, Esmaeil. (2010). Role of management strategies on managers' empowerment. Police Management Studies journal, fifth year, No. 1, 39-53
- [14] Rezaei Dizgah, Morad, Farahbod, Farzin. (2010). The impact of management strategies on psychological empowerment of tax affairs staff of Gilan Province, researcher (Management), No. 7, 109, 127
- [15] Ansari, Mohammad Esmaeil (2006). Manpower productivity. Tehran, Center for Public Management Education
- [16] Taheri, Shahn timer (2008). Productivity and its analysis in organizations. Tehran, Havaye Taze Publication
- [17] Teimoornejad, Kaveh, Sarihi Esfastani, Rasool. (2010). the effect of organizational learning on psychological empowerment of the staffs of the Ministry of Economy and Finance, improvement and evolution management studies, No. 62, pages 37-59
- [18] Vetten, David E Cameron, Kim S. (2004). Empowerment and delegation, translated by Badreddin Owrei Yazdani, Research and Management Education Institute, Karaj, Second Edition
- [19] Emamgholizadeh, Saeed, Burgheyi, SeyedReza, Zareyi Matin, Hassan. (2009). Examining the relationship between the level of employee participation in corporate decisions and their empowerment in the Telecommunication Company of Mazandaran Province, management of organizational culture, No. 19, pages. 37- 57

- [20] Tavari, Mojtaba and Sukhkian, MohammadAli and Mirnejad, SeyedAli (2008). Identifying and prioritizing the factors affecting human resources productivity using MADM techniques (Study: Jeans Company Yazd) *Journal of Industrial Management*, Autumn and Winter 2008, No. 1. Pages 71-88
- [21] Althin, Richard. (2005). Efficiency and Productivity of Employment Offices Employment: Evidence from Sweden, *International Journal of Manpower*, 26 (2): 196-206.
- [22] Appelbaum, Steven H. and Hongger, Karen. (1998). Empowerment: a contrasting overview of organizations in general and nursing in particular an examination of organizational factors, managerial behaviors, job design and structural power, *Journal of Empowerment in organization*, 6 (2): 29-50
- [23] Bandura, Albert. (1997). *Self-efficacy: the exercise of control*, New York: W. H .Freeman.
- [24] Bartel, AP. (1994). Productivity gains from the implementation of employee training programs, *Industrial Relations*, 33 (4): 411-425
- [25] Bishap, J.W.; Scott, K.D. and Burroughs, S.M. (2000). Support, Commitment and Employee Outcomes in Team Environment, *journal of management*, 26 (6): 1113-1132.
- [26] Pitts D W. (2005). Leadership, Empowerment and Public Organizations”, *Review of Public Personnel Administration*.vol25.No1:5-28.
- [27] Quinn, R. E, and. Speritzer M.G (1997). The Road to Empowerment: seven Questions Every Leader Should Consider. *Organizational dynamic*. Vol. 2. No.2, pp. 37-51.
- [28] Appelbaum. Steven H and Hongger. Karen, (1998). Empowerment: a contrasting overview of organizations in general and nursing in particular - an examination of organizational factors, managerial behaviors, job design and structural power, *journal of empowerment in organization* Vol.6 .No.2. 29-50
- [29] Thomas, K.W; Velthouse, B. A.(1990), “Cognitive Elements of empowerment: an interpretive model of intrinsic task motivation”. *Academy of Management Journal*, Vol.15, No.4 pp.666-681.
- [30] Spreitzer, G. M. (1995), “Psychological empowerment in the workplace: dimensions, measurement and validation”, *Academy of Management Journal*, Vol.38 No.5, pp.1442-1465.
- [31] Wysocki, Alen F; Kepner, Karl W,(2006). Management Beliefs that tend to reduce association motivation and productivity, P.1-2.
- [32] Blanchard, K. H., Carlos, J. P. and Randloph, A. (2003). *Empowerment take more than one minute*, San Francisco: Barret-Koehler, pp. 39.
- [33] Bowen, D. E. and Lawler, Edward E. (1992). The empowerment of service workers: What, why, how, and when, *Sloan Management Review*, 33 (3): 31-39.
- [34] Carter, Mcnamara. (2001). Strategic planning (in nonprofit or for profit organizations), Retrieved April 10, 2008 from Free Management Library Web site: [http://www.managementhelp.org/ plan_dec/str_plan/str_plan.htm](http://www.managementhelp.org/plan_dec/str_plan/str_plan.htm).
- [35] Conger, J. A. and Kanungo, R. N. (1988). The empowerment process: Integrating theory and practice, *Academy of Management Review*, 13 (3): 471-482.
- [36] Daft, R. L. (2000). *Organization theory and design*, Cincinnati: South-Western College Publishing.
- [37] Fellows, Richard et al. (2007). Enhancing Commitment through Work Empowerment, *journal of Engineering Construction and Architectural Management*, 14 (6): 568-580
- [38] Ergeneli, Azize. Ari, Guler Saglam. Metin, Selin. (2007). Psychological empowerment and its relationship to trust in immediate managers, *Journal of Business Research*, 60: 41-49
- [39] Grove, P.B.(ed). (1971). *Webster Third new International Dictionary of the English Language unbridged* Springfield, MA, G&C Merrriam p.744.