



Evaluation of critical factors affecting HR Productivity (Case Study: PSEEZ Organization)

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ABSTRACT

This research has been done to identify and analyze critical factors affecting on human resources productivity in the Pars Special Economic Energy Zone organization. The population of this research included: staffs and experts in the Pars Special Economic Energy Zone organization, among them, 250 people were randomly selected. To collect data, 3 questionnaires were used. On base of expert and masters opinions and also previous researches, we identified 28 items affecting on human resource productivity, then these items were classified into 5 groups or critical factors. Pearson correlation coefficient was used to evaluate Relationship between these factors and human resources productivity. Results showed that "Related to job factor" is the most important factor and other factor like: Structural-Managerial factor, Personal ability and Economic factors and physical factor of work environment are in the next ranks, respectively. Then we ranked each items of each factor by use of Nonparametric Kendall's W Test.

KEYWORDS: productivity, Human resources, Pars Special Economic Energy Zone Organization.

1. INTRODUCTION

Because During the time, Human's economical efforts and scrambles have been in order to accede best ideal result using at least facilities and resources. That is to say, human has always been in useful and beneficial thought and idea of his abilities and resources. This trend and enthusiasm constitutes productivity essence which we can regard its results as all human results [1].

Over recent decades, increasing attention to how to raise Competitiveness and Profitability by improving productivity has been became most controversial matter in organization. Many resources acknowledge, despite this fact that productivity has been known as one of most vital of effective factors on Competitiveness and business activities, it is not most important preference of organizations and those who have effect on production processes, they forget it [1].

Main problem to find most effectiveness guideline improving productivity is lack of sufficient knowledge in this context and common and exact mind of productivity. So that many persons who apply this concept, and eve those who always decide about productivity improvement, efficiency and effectiveness of their organization, don't know its exact meaning and often use it instead of other concepts as performance, profitability, efficiency and effectiveness.

Tangent believes that the matter leads to ignore productivity and even doing actions against it [2]. Because of that, we intend to attain guidance collection in order to improve human force productivity by identifying all effective critical factors and components and identification of their importance rates in Pars special economic energy zone organization.

Government need to various kinds of energy, especially oil and gas resources to reach developmental aims and developing a kind of economic, military and consequently political priority has led to that problems interactions and conflicts in recent century [3]. Therefore, energy is one of most important parameters dominating on international and regional equations and plays very important role in communications between governments. Future world economy perspective is explanatory of increasing significant energy demand and dominant role of gas and oil demand over next 20 years will increase more than 2 times and natural gas as chosen fuel of recent century will have great growth in energy basket items [3]. Pars especial zone, biggest world gas resource (south Pars common gas field), is as vital element in order to provide industries fuel and various economical and production activities with 15% of total world gas reservoirs. As in the Pars oil and gas company managing director's statement, starting each phase of south Pars increases internal gross income by 1% and this indicates south Pars importance [3].

Considering traced perspective for each country, that has considered Iran as a developed country in 1404 (Hegira – solar) with the first economical, scientific and technology place in region level and constituent and effective interaction in international relations, and also need to productive society and having culture, and optimal use of facilities and resources is felt [4].

On one hand, one of most important economy problems of Iran is low productivity of production factors. So that according to Asian productivity organization report, Iran has one of lowest economy productivities in this continent [5].

What should we do to solve these problems? Can we increase capital and work force productivity in country? Can we increase refresh economy of country by this way? Peter Drucker, who is as one of prominent masters of management science, believes that management means doing right work in the right way [3].

Sometimes it happens that group, team or organization recognize right work, right but don't do it right. From here, energy loss discussion and wasting resources start. What should we do in such state? Sometimes it shapes in other form, in this form that persons and groups attempt very other form, in this form that persons and attempt very much that do the right work, right but some disorders prevent from reaching desired result [6].

Now, considering the important role that gas and oil industry and especially Pars special economic energy zone, in economy and development of country, therefore, it is worthy that attention to productivity matter is at the top of all affairs and decision – makings. Main question in this investigation is that how we can proceed to promote human force productivity in Pars special economic energy zone organization, identifying and analyzing effective critical factors on human force productivity.

2. LITERATURE REVIEW

Asgharsani and et al(2013) found that option submission to personal and promoting their decision – making skills has. Direct relation on staff's productivity increase and also accessing to aims of organization and managers can attain competition advantage and organizational survival by representing patterns in order to promote this group of skills in them [7]. okeudo and ogwude (2012) In a research with matter of studying relation between effective factors on human resources and productivity in transportation industry of Nigeria, concluded that it can be increased staff efficiency. By factors such as increasing training to personnel, making motivation in them and support and respect to them and also it can increase total profitability of organization [8].

Soekimal et al. (2011) In a research, in relation to increasing productivity in structural industries in Indonesia, found that factors such as acting false directions, lack of coordination in leadership, lack of required instructions to work force can influence more effectively on whole productivity[9].

Bloom and Vanreenan (2010), observed that doing group activities and also paying persuasively, have main effect on productivity rate of human resources [10].

Kazaz et al (2008),In a research, classified effective factors or human resources productivity at structural projects in four groups of organizational, economical, mechanical, social – mental factors. They introduced organizational factors as most important group and after that economical, mechanical and social – mental factor have most importance rate (respectively) [11].

Polat and Arditi (2005), found that managers of projects in developing countries use high confidence reserve and while in – time delivery system is used in developed countries [12].

kilic and okumus (2005) did, a research, under title of effective factors on productivity on service companies like hotels in Island. Findings in this research showed that among most important effective factors on productivity in this kind of industries are staff training, customer expects, multi – skill didactic programs, management style, service quality, organization structure, staff employment, staff satisfaction, staff empowerment. Ranking results of effective factors on productivity in this research shows that factors like training and staff employment, customer expects, multi – skill didactic programs, staff motivation, occupational satisfaction, management style empowerment, payment rewards to staff and organizational culture are effective on staff's productivity increase respectively [13].

Loriman and konju stated that training, management, staff commitment are three factors of Japanese companies success in improving productivity [14].

Abdol Kadir et al (2005), identified 50 obstacles of productivity promotion of human resources in improvement industries and then ranked them. They identified lack of initial materials in workplace as most important problem. Among other important problems that were at next ranks, also were in- time non – payment of wage, change in orders, management's weakness in organizing affairs, delay in entering substances to market and lack of internal and external work force [15].

Enshassi et al (2005), introduced lack of substances and human resources inexperience as most important drawbacks and problems of human force productivity in in structural industries in Palestine [16]. In same other researches, also Alinaitwe et al (2007) in Uganda [17] and kazaz et al (2007) [18] in Turkey proceeded to identify effective factors on productivity of human force. Chan and kaka (2007) proceeded to examine effective factors on human force's productivity from official department managers' point of view and human resources of operational department. Results of research showed that managers had more importance coefficient on resources programming, operational department force in the way of applying resources [19].

3. Research Conceptual model

After identifying and studying present models in the domain of human resources productivity and also with the experienced masters and experts' view, fivefold model induced from previous models and proportional to targeted organization of this research was collected; that this model includes following critical factors:

1. Structural / managerial, 2. Related to job, 3. Work environment physical, 4. Individual ability, 5. Economical (Fig.1). It is need to say that this fivefold model includes 28 components and each one of these components considers special dimension of human resources productivity.

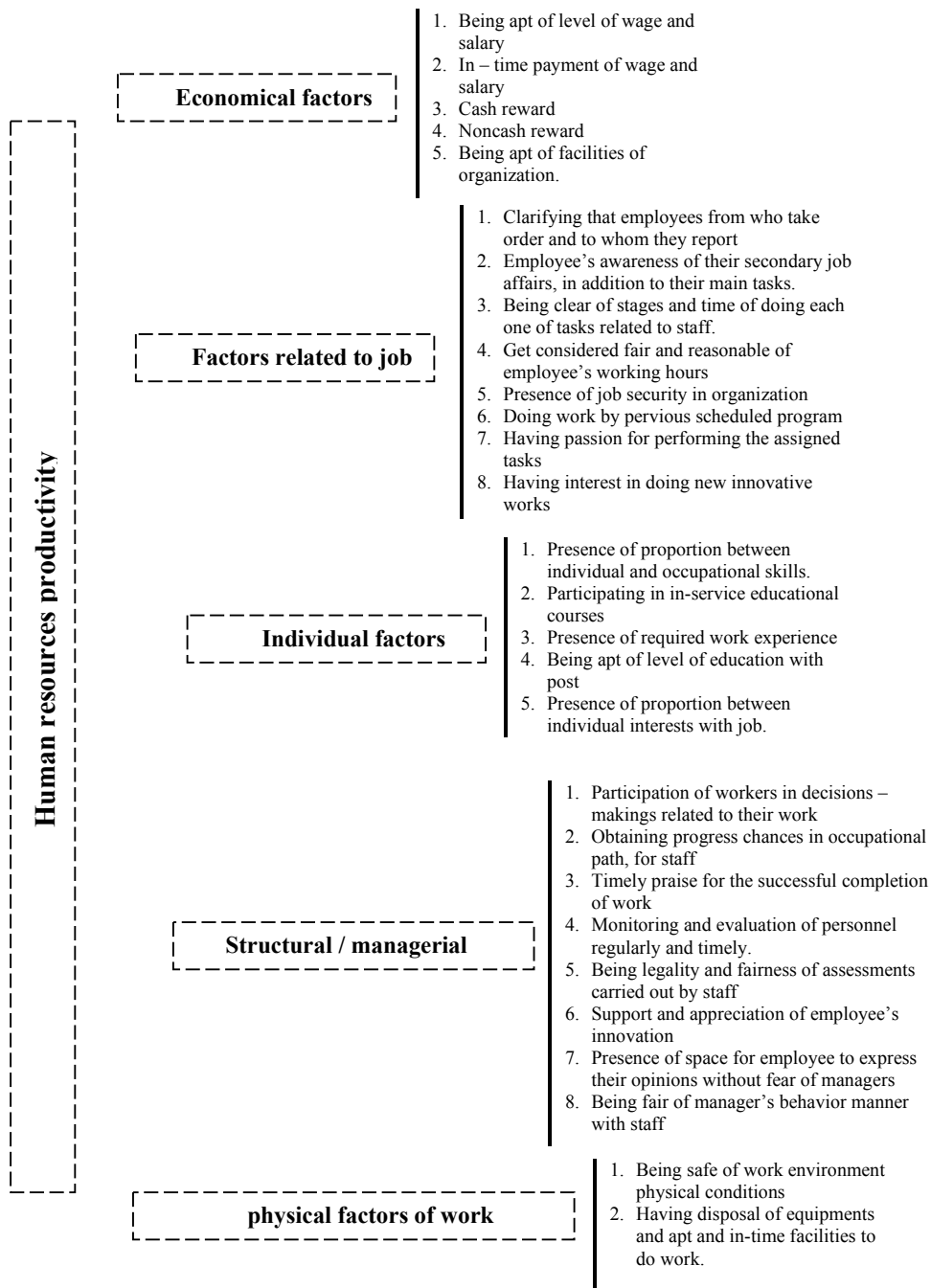


Fig.1. Research Conceptual model

4. METHODOLOGY

This research of thematic dimension in the domain of human resources, from the time dimension and from the place dimension of doing this research in 2013 is the Pars special economic energy zone located in Bushehr.

Statistical population of this research included staff and experts of Pars special economic energy (705 people) that among them 250 selected in the method of random sampling. Research method of this investigation is of descriptive – survey and is of applied research from aspect of aim of research.

Questionnaire tool was also applied to gather information. According to done research in the domain of productivity of human resources and also masters and expert's opinions and also proportional to Pars special economic energy organization, 28 components were identified as effective components on productivity of human resources of organization.

Then these 28 components were classified into fivefold critical factors and also human resources productivity in other questionnaire was examined using qualitative method. This questionnaire was designed in the form of 12 items, with professors and expert's opinion of organization.

Another questionnaire was designed in order to rank internal components related to each one of critical factors.

Finally, reliability of each of aforesaid questionnaires was calculated 0.894, 0.934 and 0.902 respectively, using Cronbach's alpha. The validity of questionnaires were studied and investigated by experts of Pars special economic organization and also professors of university, and their content validity was confirmed.

In this investigation, Pearson's correlation coefficient is used in order to examine targeted hypotheses of investigation and nonparametric Kendall's w-test is used in order to rank and have priority to each one of component related to independent variables of research. It is need to say that in this investigation SPSS-22 software has used in order to analyse data.

5. RESULTS

5.1. Test of research hypothesis:

First hypothesis:

- There is a meaningful relation between the structural –managerial factors and productivity of human resources of Pars special economic energy zone organization.

Second hypothesis:

- There is a meaningful relation between factor related to job and productivity of human resources in Pars special economic energy zone organization.

Third hypothesis:

- There is a meaningful relation between physical factor of work environment and productivity of human resources in Pars special economic energy zone organization.

Fourth hypothesis:

- There is a meaningful relation between individual ability factor and productivity of human resources in Pars special economic energy zone organization.

Fifth hypothesis:

- There is a meaningful relation between economical factor and productivity of human resources in Pars special economic energy zone organization.

Table 1: test results of research hypothesis

hypothesis	Significant level (sig.)	Pearson's correlation coefficient	Test results
First	0.000	0.606	Confirmed
Second	0.000	0.703	Confirmed
Third	0.000	0.421	Confirmed
Fourth	0.000	0.460	Confirmed
Fifth	0.000	0.446	Confirmed

As the above table shows, significant level of test is less than 0.05, in each aforesaid hypothesis, then in the confidence level of 5%, we can claim that there is a meaningful relation between structural – managerial, related to job, physical factor of work environment, individual ability, economical factor of human resources of Pars special economic energy zone organization.

Values of correlation coefficient are 0.606, 0.703, 0.421, 0.460, 0.446, respectively, that it is indicating of presence of direct relation between these variables and dependent variable in this research.

1. Ranking component of each one of effective factors on productivity of human resources

Sixth hypothesis:

- Ranks mean of all identified components which are effective on productivity of human resources of Pars special economic energy zone organization.

Table 2: results of Kendall's w test

N	250
Kendall's w	0.051
Chi – square	341.438
Df	27
Asymp. sig	0.000

Non – parametric Kendall’s w test was used in order to rank each one of effective identified component on productivity of human resources.

Considering above table and test results, we can observe value of Chi – square statistic with freedom degree of 27 and also significant level of test with value of zero, then, we can accept targeted hypothesis at confidence level 95%.

Also, in the following table, we can observe ranks mean of each one of identified components with standard deviation and their rank.

Table 3: results of Kendall’s w test related to ranking each one of internal components of effective factors on productivity of human resources

rank	Group member	component	Rank mean	Standard deviation
1	Economical	Timely payment of salary and wage	17.42	0.972
2	Related to job	Having interest to new works	17.18	1.083
3	Individual ability	Presence of required work experience	17.06	1.125
4	Structural- managerial	Presence of space that staff express their opinions without fear of managers	16.96	.953
5	Structural- managerial	Presence of progress chances in occupational path, for staff	16.06	1.019
6	Structural- managerial	Being fair of managers and vicars’ behavior manner, with staff of organization	15.88	1.179
7	Structural- managerial	Support and appreciation of staff’s innovation and creativity in doing work affairs by managers	15.57	1.153
8	Related to job	Presence of job security in organization	15.53	1.149
9	Structural- managerial	Timely praise for the successful completion of work	15.42	1.146
10	Related to job	Doing work by pervious scheduled program	15.15	1.017
11	Physical factor of work environment	Possessing apt and timely equipment and facilities to do work	15.15	1.050
12	Related to job	Having passion for performing the assigned task	14.92	1.026
13	Individual ability	Presence of fit between individual interests with job	14.82	0.912
14	Related to job	Being clear of stages and time of doing each one of tasks related to staff	14.18	0.965
15	Related to job	Clarifying the employees who take order and to when they report	14.17	0.997
16	Economic	Cash rewards	14.08	0.922
17	Economic	Being fit of level of wage and salary	14.05	0.923
18	Individual ability	Being proportionate of education level with organizational post	14.04	1.063
19	Related to job	Get considered apt and fair of staff’s working hours	13.67	1.068
20	Individual ability	Presence of proportion between individual and occupational skills	13.64	1.152
21	Economical	Being fit of welfare equipment and facilities of organization	13.57	0.843
22	Individual ability	Participating in in-services educational courses	13.26	1.076
23	Structural- managerial	Being legality and fairness of assessments carried out of staff	13.21	1.117
24	Physical factor of work environment	Being safe and secure of physical conditions of work environment	12.68	1.306
25	Structural– managerial	Monitoring and evaluation of staff in the form of regular and timely	12.37	1.149
26	Structural– managerial	Participating staff in decision – making related to their works	12.21	1.408
27	Economical	Non – cash rewards	11.93	1.541
28	Related to job	Employees’ awareness of their secondary work affairs	11.82	1.317

6. DISCUSSION & CONCLUSION

Obtained results in this research show that among effective identified critical factors on productivity of human resources, factor related to job was identified as most effective factor effecting on productivity of Pars special economic energy zone organization, after that critical factors like structural – managerial, individual ability, economical factor and physical factor of work environment are in the next ranks.

It is clear that importance degree and effecting rate of each one of internal components related to effective factors of human resources is also different from a component to component. Then importance rate of each one of aforesaid components was measured from staff’s point of view and at the end, after perception of opinions, components were ranked using Kendall’s w test.

These more important five factors that were identified are respectively timely payment of wage and salary, having interest in doing new and creative works, presence of required work experience, presence of space that staff express their opinion, without fear of managers, providing progress chances in identification of importance rate of each one of effective components on productivity of human resources of Pars special economic energy zone organization from staff and observance rate and using these components in aforesaid organization, it got clear that in some components, presence of a gap and difference between these two criterions is observed: then we can offer following suggestions in order to improve these conditions, using investigation findings and experts and critics’ opinion:

- Timely payment of salaries if it is possible.

- Providing a suitable environment in order to offer innovative ideas and people's creativity in organization, so that all people of organization have the same opportunity in this context and express their creativities without any restrictions.
- Providing opportunities that exists context of growth and progress in occupational path for all employees.
- Eliminating any discrimination in organization, so that all people including administrators and other people in organization have the same respect and dignity.
- Being fair of managers or vicars' behavior manner with staff of organization.
- Removing stressful factors in organization and providing calm atmosphere for all staff, so that people work without any stress.
- Exact identification of occupational paths in organization, so that staff have disposal its accurate and detailed description and of course creating transparency in this context.
- Attempting managers and officials of organization in order to remove and reduce consecutive orders, and especially in cases that are making confusion and contradiction.
- Exact study of organization educational needs, and exploiting specialized institutions and having experience in context of staff training.
- Opinion - measuring of staff before and after educational courses in order to understand effecting rate of these courses.
- Employing people in professional position, so that people's skills match the job needs.
- Giving action freedom to staff in professional domain, of course considering terms and conditions of written law of organization.
- Considering people's individual moods and interests at the time of transferring responsibilities.
- Continuous justification and guidance of employees in relation to related work and tasks.
- Attempting and spending cost in order to improve physical environment of work.
- Continuous invitation of staff in order to participate whatever more in decision – making and offering feedback to them.
- Attempting in order to create command unity, so that each person in organization takes order only of one responsible.
- Offering exact and clear definition of occupational practices, in order to improve transparency and to prevent any possible deviation.

REFERENCES

1. Taheri, Sh. productivity and analysis of organizations, 2013. Tehran. Hestan publication.
2. Tangen, S. "Understanding the Concept of Productivity." Proceeding of the 7th Asian-Pacific *Industrial Engineering and Management systems Conference*, 2002. Taipei.
3. Abbaszadeh, M. Effective Factors on human resource productivity in National Iranian Oil Refining and Distribution Company, 2010. Master thesis. Persian-Golf university, Industrial management department.
4. Vaziri S, Mansouri H, Adiban A. Identification & Prioritize the Factors Affecting the Productivity of Human Resources With MADM Technique, 2010. journal of Civility & Training. No 100.
5. Abedini, M. Survey on effect of training on employee productivity, 2010. Master thesis. Tehran university, Governmental Administration department.
6. Nazary, M. Effective Factors on human resource productivity in Islamic Azad University, 2009. Tehran, 8th International Management Conference in Iran, Tehran.
7. Asgarsani . H , O. Duostdar , A. Rostami. Empowerment And Its Impact On The Organization Productivity: Institute of Interdisciplinary Business Research, 2013. VOL 4, NO 11
8. Okeudo. G, and I.C. Ogwude. Relationship between Human Resource Effects and Productivity in the Nigerian Transport Industry: *British Journal of Science*, 2012. Vol. 6 (1).
9. Soekiman. A, K. S. Pribadi, B.W. Soemardi, and R.D. Wirahadikusumah. Study on factors affecting project level productivity in indonesia: *Annals of faculty engineering Hunedoara*, 2011. *International Journal Of Engineering, Fascicule 3*. ISSN 1584-2673.
10. Bloom, N. and J, Vanreenan. Human resource management and productivity, 2010. *NBER Working Paper* No. 16019. JEL No. L2,M2,O32,O33

11. Kazaz, A. Manisali, E. and Ulubeyli, S. "Effect of Basic Motivational Factors on Construction Workforce Productivity in Turkey." 2008. *Journal of Civil Engineering and Management*, Vol. 14, No. 2, pp. 95-106.
12. Polat, G. and Arditi, P. "The JIT Management System in Developing Countries." 2005. *Construction Management and Economics*, Vol. 23, No. 7, pp. 697-712.
13. Kilic, H. and Okumus, F. "Factors Influencing Productivity in Small Island Hotels Evidence from Northern Cyprus." 2005. *International Journal of Contemporary Hospitality Management*, Vol. 17 No. 4, pp. 315-331.
14. Firkola, p. Career Planning Trends in Japanese Companies, 2005. *Econ. J. of Hokkaido Univ.*, Vol 34 pp 233-242.
15. Abdul Kadir, M. R. Lee, W. P. Jaafar, M. S. Sapuan, S. M. and Ali, A.A. "Factors Affecting Construction Labor Productivity for Malaysian Residential Projects." 2005. *Structural Survey*, Vol. 23, No. 1, pp. 42-54.
16. Enshassi, A. Mohamed, S. Mustafa, Z.A. and Mayer, P. E. "Factors Affecting the Labour Productivity in Building Projects in the Gaza STRIP." 2007. *Journal of Civil Engineering and Management*, Vol. 8, No 4, pp. 245-254.
17. Alinaitwe, H. Mwakali, and J. Bengt, H. "Factors Affecting the Labour Productivity of Building Craftsmen: Study of Uganda." 2007. *Journal of Civil Engineering and Management*, Vol 8, No 3, pp. 169-176.
18. Kazaz, Aynur. and Ulubeyli, Serdar. "Drivers of Productivity among Construction Workers: A Study in a Developing Country." 2007. *Building and Environment*, Vol. 42, No. 5, 2132-2140.
19. Chan, P. W. and Kaka, A. "Productivity Improvements: Understand the Workforce Perceptions of Productivity First", 2007. *Personnel Review*, Vol. 36 No. 4, pp. 564-584.