

Model Laying out of Effective Factors in Human Force Productivity at Region of Army Staff of Medical Science University of Kermanshah

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Abstract: It is tried to study different models of human force productivity and lay out a comprehensive model for human force productivity in this research. It is a descriptive analytic and correlating research which has been done periodically in 1393. Data was collected by the researcher-made questionnaire which was assessed by instructors and expert's ideas. Its permanency was also estimated desirable by using a pilot model of 30 people and Cronbach alpha test equaling to 769. Data was analyzed by SPSS21 Software. Statistical community was the total staff of region of army staff of Medical Science of Kermanshah (290 people) and the volume of sample was estimated equally 165 people by Cochran formula. The results showed there is a meaningful and positive relation between productivity aspects and productivity. There aren't any relations between training aspect and human resource improving and productivity aspects, either. Achievements show high and positive correlating and ability of model that is useful and practical.

Key words: Productivity, human resource, aspects, positive, training

INTRODUCTION

In the targeting view human resource improvement means "making human able for better quality of life, individual social and human life" (Salehi *et al.*, 1968) Productivity improvement can cause process improvement, work relation improvement, improvement of individual and group behavior, work motivation increase, life quality increase, convenience increase, employment increase, income and payment increase (for the reason of production and profit improvement in the organization). Productivity is described as working use of resources (function, capital, land, material, energy and information) to produce goods and services and it's described as a relation between function results and duration of it, too (Mehabian *et al.*, 1969). Productivity is one of the factors which guarantees durability and permanence of organizations in this competitive world. Governing of productivity culture causes the best use of the whole material and moral facilities and growing abilities, intelligence and potential facilities of organization (Mehabian *et al.*, 1969). International and local

organizations such as work international organization explains that different products are produced by combination of four basic factor-land, capital, function and organization. These factors ratio to production is a criterion to examine productivity. Europe productivity agency also knows productivity as the degree of effective use of each production factor and they believe that productivity is a conceptual view which always wants to improve something which is existing now. Japan productivity center believes that the target of productivity improvement is to maximize using of resources, human force, facilities and etc. in a scientific method and with decrease of production expenses, marketing increase, employment increase, effort for increasing real incomes and improvement of life criterion how are useful for employees, managers and users.

In Iran national productivity organization's opinion, productivity is an intellectual idea for work and life. It's similar to a culture that its aim is making the activities wiser for a better and exalted life. There are a lot of problems in organizations which show the importance of productivity improvement in organizations such as

dissatisfaction signs, increase of references to organizations not doing their needed services long delay in responding to their necessity, numberless employees who are aimless and wandering in different rooms of officialdom and or many capacities without operators.

On the other hand, based on the published information, it has been expressed in the mass media that the total hours of weekly official work of organizations are 52 h (44 official h and 8 h weekly overtime work) but profitable work is done only for 4 h and 22 min. In other words, employees of these organizations work even <8 h over time a week. It's even claimed that the average work of government employees is 1 h and the average work of industry is 2 h while the average profitable work in London is 6 h and 15 min in Portugal 8 h and 20 min and totally in European countries 7 h and 20 min.

Now a days, the productivity increase in organizations is one of the main disturbances of executive managers and determiners of each country, as most of countries have based their main improvement plan on productivity increase, as the productivity increase has been 45 times in all over the world since 15 year ago (Nosratpanah *et al.*, 1971). Since, the most important or the main factor of decrease or increase of organizations productivity is human resource so, one of the problems which pioneer organizations managers will deal with in coming decades is effort for increasing the work productivity of employees. Ansari so, human force is the most important factor in organization productivity improvement (Mehabian *et al.*, 1969) and also the most valuable and worthwhile capital and organization resource.

The importance of human force has been proved as the most important factor in operating chain of each organization. The organization which have had great successes have followed this issue (Mehabian *et al.*, 1969). In comparison with members of Asian productivity organization, the average development of human force productivity indicator has been 2.03% during the year 2000-2006 that Iran is at the ninth rank between 14 countries which are members of Asian productivity organization (Mehabian *et al.*, 1969). Information about the productivity level of employees causes their productivity improvement. On the other hand, a great change will be happened in their process by increasing the service and production volume. Ultimately this process will help to make the enormous purposes of organization happened (Salehi *et al.*, 1968). Work force

productivity is one of the main resource of economic development and (with the changes in added values of parts) in Iran, not only human force must give better services in production process but they should be more carefl and delicate about using other production factors, so other factors achieve better productivity, too. Therefore, human force role especially expert and proficient human force is really important in a coherent and integrated system to again better purposes in economic development.

Effective factors on decrease of human force productivity:

Discrimination between employees cause of weak management, job insecurity, not being successful and reluctance to planning mid-term or long-term, not suitable work environment, lack of attention to employees necessities, not controlling and instability in controlling plans, inconsistency between the major and the job, not using the expertise in related job, the lack of management plan, lack of training, inconsistency between individual and job intelligences, supervisor inefficiency, current job disinterested ness and frequent transfer of human force, human force inflation.

Effective factors on increase of human force productivity:

Desirable and accurate behavior of leaders and managers, preparing necessary conditions of job progress for everyone, training course for employees, having clear and specific tasks, directions and rules for employees, giving sufficient authority to employees, recruiting experts and professional people partnership of employees in determination and codification of purposes and plans, high quality of work life.

Different views about productivity:

Engineers know productivity improvement as working more with the least expense. Scientists know productivity improvement as working intelligently and intentionally. Managers know productivity improvement as achieving all things together. Economists know productivity improvement as producing more products with using the available resources and facilities (effective use of production factors). Finance managers know productivity improvement as gaining more profit. In philosopher's opinion, productivity improvement is knowing that the best function has been done. For productivity improvement, effective factors on productivity must be recognized before any other action. Economists, organizations and international institutions have

Table 1: Views about productivity

Models	Component
Ansari-Ranani Model	Motivation (human necessity, work motivation, feedback, affair evaluation); reinforcement (employees training, background of creativity appearance, employees partnership, available and sufficient resources); work life quality (employees communication system, employees supervising method, human factor engineering)
Canon Model	Conditioning system, service and reward system, adequate monthly income, job extraordinary options and job advantages, work force training and development, work condition improvement, employees welfare, team working, suggestions system and job partnership and circulation of employees
Mehabian	Organization support, leadership method, reinforcement, decisions credibility, employees tendency and motivation, clarification and documentation, organization culture, organization structure, innovation and creativity, environmental conditions (Mehabian <i>et al.</i> , 1969)
Alvani and Parviz (1960)	Leadership method, motivation, competitiveness morale, mental and corporeal situation, training, experience, innovation and creativity, population characteristic (Alvani and Parviz, 1960)
Coreng Ho	Reinforcement, knowledge level, motivation, training, experience, work plans, management and leadership policies, paying methods and physical environment (Mehabian <i>et al.</i> , 1969)
Soltani	Frequent job training of managers and employees, making the employees motivated, making the background of creativity appearance, suitable system establishment of paying, establishment of encouragement and punishment system, work conscience and social discipline
Sedighiani and colleagues	Employees training, service compensation, organization structure, organization culture, employees partnership (Salehi <i>et al.</i> , 1968)
Nosrat Panah and colleagues	Motivation factors, leadership methods, creativity and innovation, training, competitiveness morale
Model of Kit Dios, John New Storm	Leadership quality, mutual trust between worker and employer, mutual organization communications, fairly awards, employees partnership in controlling the organizations affairs, development and progress possibility for employees (Shahbazzpour, 1971)
CREST Model	C (Communication), R (Respect), E (Enthusiasm), S (Support), T (Training)
Model of Hersey and Gold Smith	P (Performance), A (Ability of doing a task successfully), C (Clarity in realizing the acceptance of work method, location and the way to do it), H-organization support (the support which employees need to complete their effectiveness.) I-Incentive (motivation and tendency to do the task), E-Evaluation (judgment system about how to work), V-Validation (being suitable, rules and legitimacy of manager decision), E-Environment (a group of effective factors of external organization) (Shahbazzpour, 1971)
Shebard Model	Wide partnership of employees, mutual trust, revision in supervisor role, improvement of employees responsibilities (Shahbazzpour, 1971)
Josef Pontey Model	Employees training, good relations between employee and employer, preparing the job satisfaction facilities (Shahbazzpour, 1971)
Nazari (1967)	Motivation, training, partnership in decisions, skill, job recognition (Nazari, 1967)

mentioned different elements about it such as management and workers relations, mental and social conditions of work and workers unions activities (ILO) work behavior, management type, work unions effect, government roles and job security Sumanth work motivation of employees, methods and current system improvement, work circulation and changes in pressure level of work, job security and income Rubenand Lerman workers behavior relations Kuby and Xie work force variety Abdel-Rezek Wage rate Liu and Sakamoto Wage level skill.

Generally, factors such as frequent wok training of managers and employees, employees motivation improvement for better and more work, creation of appearance background and creativity innovation of managers and employees establishment of a payable system based on performance and establishment of a punishment and encouragement system, work conscience and social discipline evolution in system and methods which have the main and delicate role sovereignty reinforcement organization policy domination over the affairs and thrift has been known as effective factors of productivity. A lot of models have been

considered to increase the human force productivity in different levels. Following models can be mentioned (Table 1).

MATERIALS AND METHODS

It is a descriptive analytic and correlating research which has been done periodically in 1393. Data was collected by the researcher-made questionnaire which was assessed by instructors and expert's ideas. Its permanency was also estimated desirable by using a pilot model of 30 experts of region of army staff of medical science of Kermanshah and Cronbach alpha test equaling to 769. Data was analyzed by SPSS 21 Software. Statistical community was the total staff of region of army staff of medical science of Kermanshah and the volume of sample was estimated equally 165 people by Cochran formula that 6 people didn't answer the questionnaires.

RESULTS AND DISCUSSION

Results show 36.5% of participants were men and 63.5% of them were women. In terms of age, 24.5% of them

Table 2: Average and standard deviation of aspects of suggestive model

Productivity aspects of human resorces	Average	SD	Number
Motivation	11.0818	3.711030	159
Training and reinforcement	13.3459	26.55970	159
Paying system	11.4969	3.537990	159
Organization culture	12.1572	3.854200	159
Leadership	11.9623	3.239170	159
Employees partnership	12.0314	3.431830	159
Work life quality	11.5472	3.333180	159
Organization structure	12.4906	3.133870	159
Managers support	11.2893	3.477500	159
Operation	11.0566	3.663440	159
Productivity	118.4591	36.80822	159

were under 25 year old, 58% of them were between 26-35, 15.1% of them were between 36-45, 1.9% of them were over 46. In terms of marital status, 34.5% of them were single and 65.5% of them were married. In terms of education, 23.9% of them had diploma, 32.7% of them had associate degree, 40.9% of them had BS/BA and 2.5% of them had MS/MA or higher degrees. In terms of work experience, 20.8% of them had under 5 year experience, 25.2% of them had between 6-10 year experience, 33.3% of them had between 11-15 year experience, 13.2% of them had between 16-20 year experience and 7.5% of them had over a 20 year experience.

Table 2 shows that aspects of employees training and reinforcement, organization structure, organization culture and employees partnership have the most averages and standard deviations. Based on the results of Table 3, there is a positive and meaningful relation between productivity aspects and productivity, motivation and aspects (paying system, organization culture, leadership, employees partnership, life quality, organization structure, support, operation) but there isn't a relation between motivation and training and reinforcement or between reinforcement and productivity aspects.

There is a positive and meaningful relation between paying system and aspects (motivation, organization culture, leadership, employees partnership, life quality, organization structure, support, operation) but there isn't a relation between paying system and employees training and reinforcement. There is a positive and meaningful relation between organization culture and aspects (paying system, motivation, leadership, employees partnership, life quality, organization structure, support, operation) but there isn't a relation between organization culture and employees training and reinforcement.

There is a positive and meaningful relation between leadership and aspects (motivation, paying system, organization culture, employees partnership, life quality,

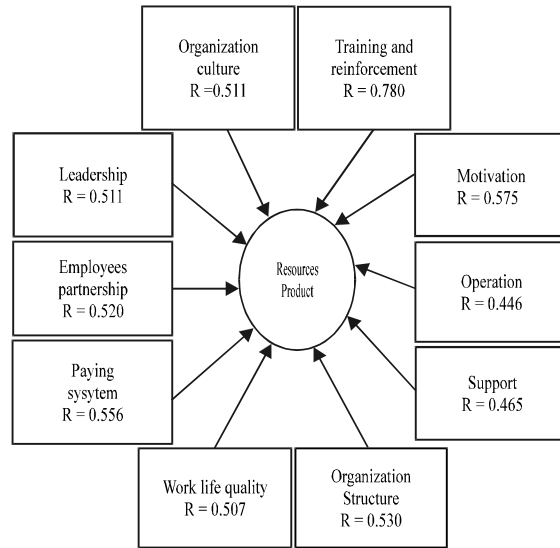


Fig. 1: Conceptual model

organization structure, support, operation) but there isn't a relation between leadership and employees training and reinforcement. There is a positive and meaningful relation between employees partnership and aspects (leadership, motivation, paying system, organization culture, life quality, organization structure, support, operation) but there isn't a relation between employees partnership and employees training and reinforcement.

There is a positive and meaningful relation between work life quality and aspects (paying system, organization culture, leadership, employees partnership, motivation, organization structure, support, operation) but there isn't a relation between work life quality and employees training and reinforcement. There is a positive and meaningful relation between organization culture and aspects (paying system, organization culture, leadership, employees partnership, life quality, motivation, support, operation) but there isn't a relation between organization culture and employees training and reinforcement.

There is a positive and meaningful relation between support and aspects (paying system, organization culture, leadership, employees partnership, life quality, organization structure, motivation, operation) but there isn't a relation between support and employees training and reinforcement. There is a positive and meaningful relation between operation and aspects (paying system, organization culture, leadership, employees partnership, life quality, organization structure, support, motivation) but there isn't a relation between operation and employees training and reinforcement (Fig. 1).

Table 3: The level of correlation and relation between productivity and the aspects of suggestive model

Aspects	Motivations	Training and reinforcement	Paying system	Organization culture	Leadership	Employees partnership	Life quality	Organization structure	Support	Operation	Productivity
Motivation	1	0.110	0.684	0.577	0.493	0.562	0.542	0.561	0.463	0.328	0.575
R Sig.	159	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Training and reinforcement	0.110	1	0.104	0.063	0.066	0.063	0.048	0.051	0.033	0.071	0.780
R Sig.	0.083	159	0.096	0.215	0.203	0.215	0.273	0.263	0.342	0.187	0.000
Paying system	0.684	0.104	1	0.685	0.519	0.442	0.483	0.499	0.445	0.290	0.556
R Sig.	0.000	0.096	159	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Organization culture	0.577	0.063	0.685	1	0.498	0.389	0.425	0.579	0.398	0.262	0.507
R Sig.	0.000	0.215	0.000	159	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Leadership	0.493	0.066	0.519	0.498	1	0.589	0.545	0.498	0.385	0.402	0.511
R Sig.	0.000	0.203	0.000	0.000	159	0.000	0.000	0.000	0.000	0.000	0.000
Employees partnership	0.562	0.063	0.442	0.398	0.589	1	0.623	0.602	0.437	0.401	0.520
R Sig.	0.000	0.215	0.000	0.000	0.000	159	0.000	0.000	0.000	0.000	0.000
Life quality	0.542	0.048	0.483	0.425	0.545	0.623	1	0.644	0.348	0.424	0.507
R Sig.	0.000	0.273	0.000	0.000	0.000	0.000	159	0.000	0.000	0.000	0.000
Organization structure	0.561	0.051	0.499	0.579	0.498	0.602	0.644	1	0.501	0.381	0.530
R Sig.	0.000	0.263	0.000	0.000	0.000	0.000	0.000	159	0.000	0.000	0.000
Support	0.463	0.033	0.445	0.398	0.385	0.437	0.348	0.501	1	0.671	0.465
R Sig.	0.000	0.342	0.000	0.000	0.000	0.000	0.000	0.000	159	0.000	0.000
Operation	0.328	0.071	0.290	0.262	0.402	0.401	0.424	0.381	0.671	1	0.446
R Sig.	0.000	0.187	0.000	0.000	0.000	0.000	0.000	0.000	0.000	159	0.000
Productivity	0.575	0.78	0.556	0.507	0.511	0.520	0.507	0.530	0.465	0.446	1
R Sig.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	159

CONCLUSION

Relatively high correlation between productivity aspects show dynamism, practicability and usefulness of the model. With the use of this model, results showed that there is a positive and meaningful relation between productivity aspects and productivity and the correlation between them is positive and relatively high. It shows that managers pay attention to human resources promotion and increase at Medical Science University of Kermanshah. The results also show that there isn't a relation between productivity aspect and employees training and reinforcement (disapproval of the relation) which shows the shortage of training hours for employees and lack of enough attention of Medical Science University to employees training and reinforcement. It seems necessary to pay attention to employees training and reinforcement.

REFERENCES

Alvani, S.M. and A. Parviz, 1960. Laying out the Management Comprehensive Model of Effective Factors on Human Force Productivity. Tarbiat Modares University, Tehran, Iran.

Mehabian, F.N., A. Ashkan and K.M. Sakine, 1969. Study of Importance Level of Identified Components of Human Force Productivity, in Employees and Members of Science Board of Colleges of Guilan Medical Science University. Zanjan University of Medical Sciences, Zanjan, Iran, pp: 94-106.

Nazari, M., 1967. Effective Factors on Human Force Productivity Studied by Azad Islamic University. Azad Islamic University, Tehran, Iran.

Nosratpanah, S., H. Kave and Y. Omid, 1971. Study of Relation Between Work Life Quality and Human Force Productivity Half-yearly Magazine of Pazhoohesh Haye Modiri-At-e-Manabe Ensani-e-daneshgah-e-jame-e-emam Hossein. Imam Hossein University, Tehran, Iran, pp:189-206.

Salehi, S., J.M. Moghadam, Y. Habibzade and A. Hab, 1968. Study of effective organization factors on human force productivity of the employees of the police headquarters of the State Lorestan. Scientific-Research Quarterly Entezam-e-Ejtemaee, Shahbazzpour, Z., 1971. Information and communication technology relation on organization productivity between managers of Kermanshah Medical Science University. BA Thesis, Supplementary Education College of Azad Islamic University of Tehran-The East unit, Tehran, Iran.