

Factors affecting labor productivity in the government organization of Iran

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ABSTRACT

Human Resources productivity is one of the important subjects among managers of organizations and management circles today is one of the most important topics. This research examines the factors affecting labor productivity per employee government agency deals. 120 employees of government agencies were randomly selected for sampling. The data collected from the questionnaires used in labor productivity, which has seven dimensions, the ability, Understanding, Motivation, organizational support, feedback, reliability, compatibility is. SPSS software was used for data analysis. Results indicate that organizational support($r = .877$), has the greatest impact on labor productivity and minimal impact on component compatibility. According to these findings further support the organization among workers, labor productivity increases. Only humans can make best use of other factors of productivity or damaged, causing a lack of productivity. As a result, the performance of a very effective and valuable.

Keywords: Labor productivity, Human resources, Staff, Workforce

{**Citation:** Abdollah Babaeinesami, Mehdi Babaeinesami. Factors affecting labor productivity in the government organization of Iran. American Journal of Research Communication, 2016, 4(2): 133-144} www.usa-journals.com, ISSN: 2325-4076.

INTRODUCTION

Due to the scarcity of the best and most effective way to achieve economic growth, increase productivity. That's why most of the world, in order to disseminate the attitudes and generalization techniques, and methods to improve the efficiency of its substantial investment in this area have done or are doing. One of the most important ways to improve the efficiency of economic development, social. Improve efficiency, can improve processes, improve working relationships, individual and group behaviors, increased motivation, increased quality of life, increased welfare, increased employment, wages (due to production and profit organization) be followed. When a country is developed or developing world, ranging from economic problems such as inflation, recession or economic downturn hurt, realizing the importance of improving productivity. With the increasing importance of productivity and the need to assess the levels of competition, technological complexity, the variety of tastes, lack of resources and rapid exchanges of information, known to everybody. Productivity is a word that is at the macro level and the micro level, there is a range of global efficiency and individual productivity are included. Despite the importance and extent of productivity, the productivity is not clear to many managers often restrict it to his own views. As Sink (1985), stated: Although most debated management efficiency of the present age is, unfortunately, less than any other subject concept is realized. But given the above, the main axis of the productivity of labor organization.

Various definitions of productivity

Productivity has been the case over the past decade has increasingly attracted the attention of researchers (Sahay, 2005; Parasuraman, 2002). In this section we mention a few definitions of productivity. In general terms, productivity, the relationship between the product or service produced by the production system inputs which are used for the product. Productivity as well as efficient use of resources (labor, capital, land, materials, energy and information) to produce goods and services is defined. Productivity can also be used to define the relationship between outcomes and length of time (Prokopenko, 1987). As is understood from the above definitions, Terms and definitions are similar and close to the main axis. The most important factor that determines all the definitions are used to produce than what is obtained in the process. At the same time, the productivity of labor is the prime concern and all efforts are focused on improving workforce productivity. In other words, labor productivity is the engine of any kind, but they have changed over time. The evolution of the concept of

productivity in the economy as it shows. The Asass term labor productivity was raised. The definition of Sumanth (1984), we conclude this section. His definitions of various categories of labor productivity are considered as follows:

- Engineering: doing the most work with the least cost
- Scientists: Doing Business wise and informed
- Managers: Achieving everything together with effective performance
- Philosophers: knowing the work is done
- Financial Management: Save More

All these definitions emphasize the common sense and it will improve the use of resources and better sources.

A review of studies

There are some studies about productivity and economic factors affecting it at the aggregate level, or using value added for broad activities and industries. There are fewer industry studies focusing on sectors level, and even fewer discussing the aggregation across industries. There is no serious debate in this literature about the factor analyzing the application of the general equilibrium and global efficiency, and a similar consideration about its future trend (Cao et al., 2009). However, here we briefly highlight existent studies. Chow (1993), employing formal data prior to 1980 on the material sectors deduced that there was mainly no technical progress in 1952 to 1980. Borensztein and Ostry (1996) estimated that TFP growth was -0.7% per year during 1953 to 1978, but rose to an average 3.8% per year during 1979 to 1994.

n a survey by the Nguyen and Cheng (1997), using regression analysis was conducted in five provinces in China has revealed that training farmers have a big impact on their livelihood, they were trained in the study of households with household head of the President they were untrained comparison and found that households whose head had only three years of teaching experience in dignity lived in a much better situation. Takashi kurosaki (2001), using the Cobb-Douglas function of time series data and the impact of human capital on productivity in agriculture and non-agricultural activities in rural Punjab province of Pakistan will be assessed. The results show that the private rate of return to education for men in non-agricultural activities are significantly positive. The impact of human capital on wages and

productivity in agricultural activities is weak. Finally, we conclude that the more educated household members have comparative advantage in non-agricultural activities.

Byringiro and Reardon (1996), the inverse relationship between farm size and productivity of land and labor respectively, while Seung (1974), a positive relationship between the size of the efficiency and the productivity and efficiency identified. Research has shown that human capital is an important factor in the production function. This is an important element in explaining differences in productivity growth across different countries (Hicks, 1987).

Also, Hu and Khan (1997) estimate China's TFP growth at 3.9% during 1979 to 1994; this contributed more than 50% to output growth, compared to 33% from capital formation. Woo (1998) estimates GDP growth using value added from all sectors, but instead of using the formal real value added data, he recalculates them using producer price indices. He deduced that, for the period 1979 to 1993, the official growth rate of 9.3% per year is revised to 8.0%, which is then decomposed to labor force growth (1.4%, with no adjustment for changes in labor composition), capital accumulation (4.9%), reallocation effect (0.6%) and TFP growth (1.1%). He also reports a deceleration of TFP growth; from 2.8 to 3.8% per year during 1979 to 1984 to -0.11 to 1.58% during 1984 to 1993.

In another study that does not use the formal GDP data. Woo (1998), using 1979 to 1993 data, deduced some results by modifying formal GDP and decompose value added into factor growth, reallocation and TFP growth. Fan et al. (1999) examined economic growth in China. They divided the Chinese economy in four sectors: 1) agriculture, 2) urban services, 3) urban industrial, and 4) rural enterprises for 1978 to 1995 and estimate that TFP growth give 4.2% points to the aggregate annual GDP growth. In an earlier paper, Wu(2002) proposed an upward-bias hypothesis that the Chinese formal growth index overstates China's real industrial growth act. Therefore, they conducted a downward correction based on ceremonial physical output data. Chow and Li (2002) follow Chow (1993) and estimate a Cobb–Douglas production function, but update the analysis to 1998.

Measure labour productivity

Productivity is commonly defined as a ratio of a volume measure of output to a measure of input use (OECD, 2001) .Among other productivity measures such as multi-factor productivity or capital productivity, labour productivity is particularly important in the economic and statistical analysis of a country. Labour productivity is a revealing indicator of

several economic indicators as it offers a dynamic measure of economic growth, competitiveness, and living standards within an economy. It is the measure of labour productivity (and all that this measure takes into account) which helps explain the principal economic foundations that are necessary for both economic growth and social development (OECD, 2001).

Labour productivity: A relationship between production and factors of production

Although the ratio used to calculate labour productivity provides a measure of the efficiency with which inputs are used in an economy to produce goods and services, it can be measured in various ways. Labour productivity is equal to the ratio between a volume measure of output (gross domestic product or gross value added) and a measure of input use (the total number of hours worked or total employment).

Labour productivity = volume measure of output / measure of input use

Volume measure of output

The volume measure of output reflects the goods and services produced by the workforce. Numerator of the ratio of labour productivity, the volume measure of output is measured either by gross domestic product (GDP) or gross value added (GVA). Although these two different measures can both be used as output measures, there is normally a strong correlation between the two. There is a preference for value added as taxes are excluded.

Measure of input use

The measure of input use reflects the time, effort and skills of the workforce. Denominator of the ratio of labour productivity, the input measure is the most important factor that influences the measure of labour productivity. Labour input is measured either by the total number of hours worked of all persons employed or total employment (head count).

There are both advantages and disadvantages associated with the different input measures that are used in the calculation of labour productivity. It is generally accepted that the total number of hours worked is the most appropriate measure of labour input because a simple headcount of employed persons can hide changes in average hours worked, caused by the evolution of part-time work or the effect of variations in overtime, absence from work or shifts in normal hours. However, the quality of hours-worked estimates is not always clear. In particular, statistical establishment and household surveys are difficult to use because of their varying quality of hours-worked estimates and their varying degree of international

comparability. In contrast, total employment is easier to measure than the total number of hours worked. However, total employment is less recommended as a measure of labour productivity because it neither reflects changes in the average work time per employee nor changes in multiple job holdings and the role of self-employed persons (nor in the quality of labour).

The main types of indicators of productivity

Given that productivity managers, politicians, economists, accountants, engineers and industries are defined slightly different definitions of efficiency can be presented. In this regard, there are four types of core productivity (Sumanth, 1984):

Partial productivity

Partial productivity is the ratio of outputs to one input factor. For example, labor productivity, the ratio of outputs to inputs Lamb, a measure of labor productivity, capital productivity and efficiency so minor raw materials are examples of the partial productivity.

Total Factor Productivity

Total factor productivity is defined as the ratio of net output to the inputs of labor and capital. Net output is total output minus intermediate goods and services purchased in other words, the denominator of the ratio of labor and capital inputs are always included.

Total productivity

Overall efficiency is the ratio of total output to the sum of all input factors. Productivity measures the joint effect of all inputs in the production of the show.

Comprehensive total productivity

Comprehensive total productivity is the product of the index of total factor productivity in the non-tangible factors. The most complex indicators measure the efficiency index of what is prevalent because it broadens include qualitative factors related to consumer satisfaction.

Model to improve productivity

Hershaur and Rush Model

These two experts have proposed a model for labor productivity. These models focus on workforce performance model that directly or indirectly affect the individual and organizational factors. Each factor in the model can be compiled as a function of labor and other factors can affect the outcome of the labor force are considered. This model is the result of feedback and delay characteristics. That is the result of an act by an individual or group will affect the outcome of the same person or group. This model has been used successfully by several companies(Hershaur and Rush, 1978).

Employee empowerment and productivity of human resources

Studies on leadership and management skills suggest that activities associated with empowerment, the main component of effective management and organizational activities. Empowerment in organizations as a means to facilitate the creation of motivation and behavior to increase productivity, it is known (Yang and Choi, 2009).

The definition of empowerment, there are two approaches: the structural approach (also called the situation or traditional), and psychological approaches(Yang and Choi, 2009).

The role of human resources and labor

Traditional HR activities generally include the selection, training, compensation and career path are scheduled. The activities on human and social aspects of the organization such as teamwork, motivation and behavior, communication and human relationships are emphasized. Despite the large aid organizations and the field of vision are limited Therefore caused that many organizations are not able to predict the location of today's changing and evolving human resources to achieve (Sumanth, 1984).

Changes in the composition of the workforce and job skills is facing new challenges. Managers are scrambling to pave the challenges are hard. The laws and policies that enable organizations to ascertain the best use of the opportunities arising from these developments, available to deal with the threat. In this regard, one of the efforts, coined the term human resource development. Human resource development is to organize the business and to enhance the ability to modify a specific time learning how to do the job. (Nadler and lawler, 1983).

This makes the management of your traditional status as employees of outside employment and human resources management system, turn. The link between the industrial and post-industrial manpower productivity change. In terms of importance, the productivity of human resources, the status of man and his contribution to the production of goods and services, more and more attention. One of the strategies for productivity, considering the role of human resources.

METHODOLOGY

The experimental group of this research consisted of 120 people and they were gathered randomly among the Governmental organizations staffs. A questionnaire was planned and distributed to them and 150 questionnaires were filled totally, among which 120 papers were used in analysis and the rest were omitted. Questionnaire used in the survey questionnaire, which is a 7 to a survey of industrial design. Questions and how it has been modified so that it is appropriate to respond to government employees. Labor productivity questionnaire consists of 26 items and seven factors (ability, understanding, organizational support, motivation, feedback, reliability, compatibility, respectively) (Table 1). Answers as 5 degrees (very low, low, The average, high, very high). The first option is to choose a subject so little and so much to choose option 5 score is.

Validity and reliability

In Labor productivity questionnaire, the reliability ratio of this questionnaire is 0.861, and Ensure that a sufficient number of questions to the appropriate tool to measure the concept of measure in practice, its validity has been shown.

RESULTS

To investigate the factors affecting Labor productivity Pearson correlation method was used. The first, based on the correlation between the variables is discussed. Thus, using the statistical software SPSS, which is a component of the labor productivity of staff productivity are shown to be more effective. (Table2).

Table1. Factors of labor productivity

Labor productivity factor	Labor productivity indices
Ability	Success on the Job In-service training Show the training necessary to do the job
Understanding	Officials warn of errors caused by a lack of understanding of the work Encouraged to ask for the correct work Understanding of the business objectives of the organization Attempt to understand the employees' work
Organizational support	Allocate sufficient funds to the various units of the organization The availability of adequate equipment needed jobs Support other units in achieving the goals of your unit Supported directly responsible for carrying out the difficult task
Motivation	Opportunities for promotion in jobs Cash reward to show initiative in times Welcome and thank you for the initiative Director superior comfort in times of personal problems
Feedback	Awareness of the quality of their work Located at ways to improve performance Feedback on the performance of individual employees In the course of getting positive results and negative
Reputation	Organizational decisions consistent with ethical principles Fairness of organizational decisions Terms and merit-based appointment of personnel Superior to the trust managers
Compatibility	Impact of market conditions on its performance Impact of changes in economic conditions of their performance Effectively compete with similar organizations on their performance

Table2. Correlation between Labor productivity and its elements

	Pearson Correlation	Sig. (2-tailed)	N
Labor productivity	1		120
Ability	.694**	.000	120
Understanding	.781**	.000	120
Organizational support	.877**	.000	120
Motivation	.786**	.000	120
Feedback	.807**	.000	120
Reputation	.709**	.000	120
Compatibility	.530**	.000	120

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

Table 2 shows the correlation between Labor productivity and its components.

As you can see in Table 2, the r (correlation coefficient) indicates that it is more and more connected relationship between the two variables exists. The relationship between Labor productivity and Organizational support to the staff there 0.01 is stronger ($r = .877$). Whatever the cause of the Organizational support among the employees to increase Labor productivity also increases. The next component is the Feedback and Motivation. Correlation of other components as shown in the table above.

CONCLUSION

Efficiency as a competitive advantage in organizations, has been studied in many ways. In this type of analysis, and the analysis is focused on several factors. This paper examines labor productivity is discussed. The results of the present study show that, among indices of

labor productivity, Organizational support is the most effective and important. And according to the other factors of labor productivity, if employment Organizational support is increased, labor productivity will rise and as a result the ability and product of organization will increase. This also will have positive effects on the operation of organization. The results imply that labor productivity is measurable by the seven mentioned dimensions. The productivity of labor is realized by its main man alone can be other factors to efficiently use productivity and efficiency will cause them to spoil. This model could be used by managers to improve labor productivity capability.

REFERENCES

- Borensztein, E., & Ostry, J. (1996). Accounting for China's Growth Performance. *Am. Econ. Rev.*, 86: 224-228.
- Byringiro, F., & Reardon, T.(1996). Farm Productivity in Rowanda. *Agricultural Economics*. 15:127-136.
- Cao, J., Ho, M., Jorgenson, D.W., Ren, R.S., & Yue, X.L. (2009). Industrial and aggrega measures of productivity growth in China.
- Chow, G. (1993). Capital Formation and Economic Growth in China. *Q. J. Econ.*, 108(3): 809-842.
- Chow, G., & Li, K.W. (2002). China's Economic Growth: 1952–2010. *Econ. Develop. Cult. Change*, 51: 247-256.
- Fan, S., Zhang, X., & Robinson, S. (1999). Past and Future Sources of Growth for China. International Food Policy Research Institute, EPTD Discussion, P: 53.
- Hershaur, J.C., & Rush, W.A. (1978). A Worker Productivity Model and Its Use of Lincol Electric, *Interfaces*, 8(3).
- Hicks, N.L.(1987). Education and economic growth, economic of education, research and studies. George psacharopoulos: pergamonpress.
- Hu, Z., & Khan, M. (1997). Why is China Growing So Fast? *IMF Staff Papers*, 44: 103-131.
- Nadler, D.A., & lawler, E.F. (1983). Quality of Work of Work life:Perspective and Direction, *Organizational Dynamics*.

- Nguyen, T., & Cheng, E. (1997). Productivity gains From Former Education in China. *The Australian Journal of Agricultural & Resources*. 41(4): 471-497.
- OECD Publications. Measuring productivity – OECD Manual: measurement of aggregate and industry-level productivity growth. 2001, page 39.
- OECD Publications. Measuring productivity – OECD Manual: measurement of aggregate and industry-level productivity growth. 2001, chapter 2.
- Seung, S.V.(1974). Employment and Labor productivity in India since 1950. *Economics Development and cultural change*. 22(4):673-690.
- Sink, D. S. (1985). *Productivity management*, John Wiley & Sons.
- Sumanth, D.J.(1984). *Productivity Engineering and Management*, McGraw-Hill.
- Takashi, K.(2001). Effects of Human Capital on Farm and Non-Farm Productivity in Rural Pakistan. *Journal of Development Economics*. 19(1):79-86
- Woo, W.T. (1998). Chinese Economic Growth: Sources and Prospects. In Fouquin M and Lemoine (eds), *The Chinese Economy*, Economica, London.
- Wu, H.X. (2002). How Fast Has Chinese Industry Grown? Measuring the Real Output of Chinese Industry. *Rev. Income Wealth*, 48(2): 179-204.
- Yang, S.B., & Choi, S. (2009). “Employee Empowerment and Team Performance”, *Team Performance Management*, 15(5), 289 – 301.