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Investigation of the Effect of Management Skills (Technical, Human and Cognitive) on Productivity of Human Resources in Iran

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Abstract: Today, there is no doubt in the role and importance of manpower in society. Among the factors of production (land, labor, technology, capital), most valuable, rarest and most unusual factor is manpower. Lack of attention to labor productivity and paying attention to other factors will not only reduce the efficiency and effectiveness of the organization, but also cause increase in loss and accidents and dissatisfaction of manpower. Therefore, paying attention to the human skills in order to increase labor productivity in the organization can be useful. Totally, 100 questionnaires were distributed to staff of Islamic Azad University of Urmia city, that 66 questionnaires were used for the final analysis, which the results from analysis of them based on simple linear regression show that management skills (technical, human and cognitive) have a significant and positive influence on productivity of human resources in Iran.

Key words: Cognitive Skills · Human Skills · Productivity of Human Resources · Technical Skills

INTRODUCTION

Man has always been focused on its economic efforts to obtain maximum results from minimum effort and resources. This tendency can be called desire to attain higher productivity. All human innovations of the basic tools used in primitive times to the present complex and intricate electronic and mechanical equipment are influenced by the same desire and enthusiasm. Every wise man wants to do the best to get the best interest. In insights of scientific management with foundations of "Friedrich Venistoteylor", rationalism of organization or "rational behavior of organization" "is used interchangeably with the productivity and efficiency. Basically management is "knowledge of increasing in productivity and efficient use of available resources to achieve defined goals".

Productivity is a concept that is comprehensive and generally its increase as a necessity for improving living standards, greater prosperity and peace and human welfare, is the basic goal for all countries and Crucial for the economy and government policy makers. Productivity is a tree full of content, branches and leaves.

Following the excellence and perfection in human knowledge in social and economic issues, the concept of productivity is also gradually changing in terms of form and content and newer and more comprehensive explanations have been offered to it [1].

In today's competitive world, productivity as a improvement strategies-based philosophy and vision is the most important goal of any organization and can be used as a chain include activities of all sectors of society. So that the mission of management and the main objective of directors and managers is effective and efficient use of various facilities and resources such as labor, capital, materials, energy and information. It has caused that productivity and proper use of total factors of production (both goods and services) to become a national priority and all communities come to believe that the life of any society irrespective of issue of productivity is impossible and our country is no exception to this rule and the concept of productivity contribution in its development is great. Since among the production factors, human factor, unlike other resources is known as organizational coordinating with other agents and is important leverage

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in increase and decrease in productivity of organization then it is to have a special place and special attention should be paid to.

In total, it must be acknowledged that the activities of any organization is influenced by a range of factors that the understanding of these factors can help to improve the activities and organizational goals. However, the fact that productivity is a function of many different factors, which influenced by mission, activities, operations and factors such as these, varies from organization to organization and the importance and influence of these factors on the productivity of the organization are not the same; thus It is not possible for organization to engage in all fields. Necessary to achieve the highest productivity, in the first it is needed these factors identify and prioritize in terms of importance according to academic standards. Then, to improve productivity, develop action plans needed to be constructed [2].

In this paper an attempt has been made to consider very different view as the impact of new management skills like human, technical and cognitive skills on human resources productivity.

Literature Review

Management Skills: Based on field research in administration and his own firsthand observations of executives in the workplace, Katz [3] suggested that effective administration (i.e., leadership) depends on three basic personal skills: technical, human and conceptual. Katz [3] argued that these skills are quite different from traits or qualities of leaders. Skills are what leaders can accomplish, whereas traits are who leaders are (i.e., their innate characteristics). Leadership skills are defined in this chapter as the ability to use one's knowledge and competencies to accomplish a set of goals or objectives. This chapter shows that these leadership skills can be acquired and leaders can be trained to develop them.

Technical Skill: Technical skill is knowledge about and proficiency in a specific type of work or activity. It includes competencies in a specialized area, analytical ability and the ability to use appropriate tools and techniques [3]. For example, in a computer software company, technical skill might include knowing software language and programming, the company's software products and how to make these products function for clients. Similarly, in an accounting firm, technical skill might include understanding and having the ability to apply generally accepted accounting principles to a client's audit. In both these examples, technical skills involve a hands-on activity with a basic product or process within an organization. Technical skills play an essential role in producing the actual products a company is designed to produce.

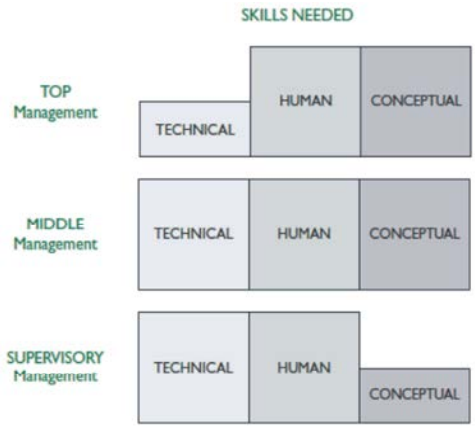

Fig. 1: Management Skills Necessary at Various Levels of an Organization (Source: Katz [3])

As illustrated in Figure 1, technical skill is most important at lower and middle levels of management and less important in upper management. For leaders at the highest level, such as chief executive officers (CEOs), presidents and senior officers, technical competencies are not as essential. Individuals at the top level depend on skilled subordinates to handle technical issues of the physical operation.

Human Skill: Human skill is knowledge about and ability to work with people. It is quite different from technical skill, which has to do with working with things [3]. Human skills are "people skills". They are the abilities that help a leader to work effectively with subordinates, peers and superiors to accomplish the organization's goals. Human skills allow a leader to assist group members in working cooperatively as a group to achieve common goals. For Katz [3], it means being aware of one's own perspective on issues and, at the same time, being aware of the perspective of others. Leaders with human skills adapt their own ideas to those of others. Furthermore, they create an atmosphere of trust where employees can feel comfortable and secure and where they can feel encouraged to become involved in the plan-ning of things that will affect them. Being a leader with human skills means being sensitive to the needs and motivations

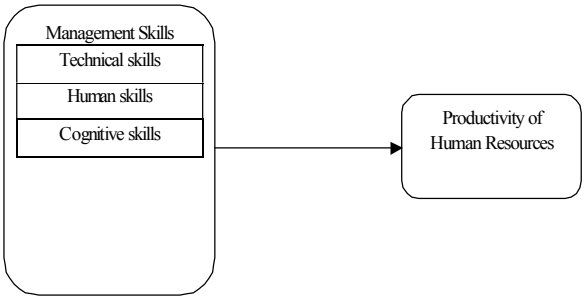

Fig. 2: The conceptual model for research

of others and taking into account others' needs in one's decision making. In short, human skill is the capacity to get along with others as you go about your work.

In Figure 1, human skills are important in all three levels of management. Although managers at lower levels may communicate with a fargreater number of employees, human skills are equally important at middle and upper levels.

Conceptual Skill: Broadly speaking, conceptual skills are the ability to work with ideas and concepts. Whereas technical skills deal with things and human skills deal with people, conceptual skills involve the ability to work with ideas. A leader with conceptual skills is comfortable talking about the ideas that shape an organization and the intricacies involved. He or she is good at putting the company's goals into words and can understand and express the economic principles that affect the company. A leader with conceptual skills works easily with abstractions and hypothetical notions [3].

Conceptual skills are central to creating a vision and strategic plan for an organization. For example, it would take conceptual skills for a CEO in a struggling manufacturing company to articulate a vision for a line of new products that would steer the company into profitability. Similarly, it would take conceptual skill for the director of a nonprofit health organization to create a strategic plan that could compete successfully with for-profit health organizations in a market with scarce resources. The point of these examples is that conceptual skill has to do with the mental work of shaping the meaning of organizational or policy issues-understanding what a company stands for and where it is or should be going [3].

In Figure 1, conceptual skill is most important at the top management levels. In fact, when upper-level managers do not have strong conceptual skills, they can jeopardize the whole organization. Conceptual skills are also important in middle management; as we move down to lower management levels, conceptual skills become less important.

Productivity of Human Resources: Productivity is a relationship between outputs and inputs. It rises when an increase in output occurs with a less than proportionate increase in inputs, or when the same output is produced with fewer inputs" [4]. Productivity can also be considered in monetary terms. If the price received for an output rises with no increase in the cost of inputs, this is also seen as an increase in productivity (for example, due to an increase in the world price for agricultural or mining commodities).

Productivity can be measured either in terms of all factors of production combined (total factor productivity) or in terms of labour productivity, which is defined as output per unit of labour input, measured either in terms of the number of persons employed (as in this report) or in terms of the number of hours worked [4]. In order to examine productivity levels across countries in a meaningful way, the raw figures for gross domestic product (GDP) in US dollars per employed person are converted into comparable terms on the basis of purchasing power parity (PPP), which takes account of differences in the price of a standard set of goods and services in different countries.

Productivity improvements can also be understood at different levels. The productivity of individuals may be reflected in employment rates, wage rates, stability of employment, job satisfaction or employability across jobs or industries. Productivity of enterprises, in addition to output per worker, may be measured in terms of market share and export performance. The benefits to societies from higher individual and enterprise productivity may be evident in increased competitiveness and employment or in a shift of employment from low to higher productivity sectors.

An increase in productivity at any level can be attributed to various factors, for example, new capital equipment, organizational changes or new skills learned on or off the job. Productivity is affected by factors at the individual level, such as health, education, training, core skills and experience; by factors at the enterprise level, such as management, investment in plant and equipment and occupational safety and health; and by factors at the national level, such as supportive national macroeconomic and competition policies, economic growth strategies, policies to maintain a sustainable business environment and public investments in infrastructure and education.

[A] Thorough understanding of productivity would fill (and has filled) volumes as, rather unhelpfully, just about "everything" matters. Indeed, a truly thorough excavation of the topic would entail an unpacking of all the determinants of growth and development. For example, the prime source of productivity growth is technological change. Technological change, in turn, relies on innovation, which itself is influenced by an array of institutions, the quality of the supply of human capital, competitive market dynamics, spending on research and development (R&D) and investment in general. These in turn depend upon the strength and stability of aggregate demand and thus on the macroeconomic framework. Investment is a catalyst for innovation, but the reverse is also true: innovation spurs investment.

Changes in the organization of work and production have a profound influence on productivity … from … the birth of the factory system ... to contemporary discussions of the "knowledge economy" and "high performance work systems," both of which underscore the salience of human capital and its organization as a source of productivity growth and competitive advantage [4].

It is important to recognize that skills development and other investments in human capital comprise only one set of factors necessary for productivity growth. Skills development alone cannot raise enterprise and national productivity. Other factors and policies are likewise insufficient if they are implemented in isolation of skills development. One of the messages of this report is that skills development must be an integral part of broader development strategies if it is to deliver on its substantial potential to contribute to overall productivity and employment growth.

Skills are critical in the structural adjustment of economies. As economies move from relative dependence on agricultural production to manufacturing and service industries, workers and enterprises must be able to learn new technical, entrepreneurial and social skills. Inability to learn new skills because of inadequate basic education or lack of opportunity slows the transfer of all factors of production from lower to higher value added activities.

Research Hypothesis: Based on the facts raised in research theoretical framework section, the following hypotheses are addressed:

H1: There is a significant relationship between technical skills and productivity of human resources.
H2: There is a significant relationship between human skills and productivity of human resources.
H3: There is a significant relationship between cognitive skills and productivity of human resources.

Therefore, based on the hypothesis, figure 1 is a conceptual model to this study.

Methodology: This study is practical in terms of purpose and is descriptive on the base of data collection and among the types of descriptive research is correlational type. In this study to collect data required, Questionnaire has been used and also to examine the theoretical basis of research, library studies and Institutional documents have been used. Statistical community has 213 members among employees of Islamic Azad University of Urmia. This amount includes all employees of Islamic Azad University of Urmia. Simple random sampling is the type of sampling in this research and sample size is determined 66 persons based on the Cochran formula.

Reliability of the Questionnaire: In the first analysis, the reliability of the questionnaire was considered. Then the first type of questionnaires was distributed. After collecting the Cronbach's alpha was calculated for each variable related question, the result of a questionnaire shows good reliability.

Hypothesis Testing and Result

Hypothesis 1: In the Table 3, Pearson correlation coefficients shows that there is a significant relationship between managers technical skills and human resource productivity ($P < 0.05$). And to say that the relationship is significant at a confidence level of about 0.95 percent and the relationship between managers' technical skills and human resource productivity is 54% and direct.

Table 1: Cronbach's alpha for the dependent and independent variables of the questionnaire

Sub scales	The number of items	Cronbach's alpha	Cronbach's alpha based on standardized questions
Productivity of Human Resources	22	0.82	0.83
Management Skills	9	0.93	0.94

Table 2: Measures of central tendency and dispersion of the dependent and independent variables

Variables		Cognitive skills	Technical skills	Human skills	HR productivity
Number	Valid	66	66	66	66
Average		3.29	3.17	2.89	4.04
Middle		3.33	3.17	3.00	4.14
Standard deviation		1.05	1.06	1.10	0.42
The Lowest data		1	1	1	2.82
The highest data		5	5	5	4.82

Table 3: Relationship between technical skills and productivity of human resources

HR productivity	Error level	The significance level	Coefficient of determination	Pearson correlation coefficients
Managers technical skills	0.05	0.00	0.29	0.54

Table 4: Relationship between human skill and human resource productivity

HR productivity	Error level	The significance level	Coefficient of determination	Pearson correlation coefficients
Managers human skills	0.05	0.00	0.22	0.47

Table 5: The relationship of cognitive skills of managers and human resource productivity

HR productivity	Error level	The significance level	Coefficient of determination	Pearson correlation coefficients
Managers cognitive skills	0.05	0.00	0.31	0.56

Hypothesis 2: In the Table 4, Pearson correlation coefficients shows that there is a significant relationship between managers human skills and human resource productivity ($P < 0.05$). And to say that the relationship is significant at a confidence level of about 0.95 percent and the relationship between managers' technical skills and human resource productivity is 47% and direct.

Hypothesis 3: In the Table 5, Pearson correlation coefficients shows that there is a significant relationship between managers cognitive skills and human resource productivity ($P < 0.05$). And to say that the relationship is significant at a confidence level of about 0.95 percent and the relationship between managers' cognitive skills and human resource productivity is 56% and direct.

CONCLUSION

The results of the study of research hypotheses suggest that between human resource productivity and management skills, there is a significant relation ship and positive correlation. In other words, by improving management skills, human resource productivity is improved in Azad University of Urmia.

In the first research hypothesis, according to the Pearson test, the significance level of the test (0.000) is smaller than the error level of test (α=0.05) and Pearson correlation coefficient is equal to 0.54. So there is direct and significant relationship between managers' technical skills and human resource productivity.

In the second research hypothesis, according to the Pearson test, the significance level of the test (0.000) is smaller than the error level of test (α=0.05) and Pearson correlation coefficient is equal to 0.47. So there is direct and significant relationship between managers' human skills and human resource productivity.

According to the results of testing research hypotheses in the third research hypothesis, according to the Pearson test, the significance level of the test (0.000) is smaller than the error level of test (α=0.05) and Pearson correlation coefficient is equal to 0.56. So there is direct and significant relationship between managers' cognitive skills and human resource productivity.

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