



# Identifying and Investigating the Most Important Issues, Challenges and Factors of Productivity in University: A case Study of Urmia University

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**Abstract:** This paper first examines the efficiency in the organization. Then, it examines the most important issues, challenges and factors of productivity in Urmia University from four major dimensions, including: 1. Costs management, 2. Human resource empowerment, 3. Organizing university activities, 4. University relationship with industry. The research and data collection procedure included two quantitative and qualitative stages. Therefore, this research can be considered among the mixed studies. At the qualitative stage of research, by reviewing of literature and interviewing with managers and deputies, the researcher tried to identify the most important issues, challenges, and factors affecting productivity in the university. Then, a researcher-made questionnaire was designed at quantitative stage. The research population included 321 faculty members of Urmia University. The research sample was determined to be 180 people and sample members were selected by using convenient sampling method. To collect the data, a questionnaire designed in 4 main components and 16 items based on the 5-point Likert scale was used. Content validity of the questionnaire was confirmed by qualified professors and the Cronbach's alpha coefficient was used to determine the reliability of the questionnaire. The results revealed that all four factors of costs management, human resource empowerment, organizing of university activities and the university relationship with industry were effective in organizational productivity from the viewpoint of the faculty members of Urmia University. Among these factors, costs management factor had the highest effect and human resources empowerment had the lowest effect on the productivity of Urmia University.

**Keywords:** Productivity, Empowerment, Organizing, Costs Management, University Relationships with Industry.

## INTRODUCTION

One of the major issues faced by organizations is the productivity issue. Thus, it is necessary to conduct extensive studies in this regard and provide the appropriate solutions to increase the organizations' productivity and performance. All activities performed by an organization are influenced by a set of factors. Investigating these factors can be helpful in improving the activities and achieving the organizational goals. As money and capital and resources of companies and organizations are limited, they should be used effectively. It reflects the importance of productivity in the organization. Its main goal is to make optimal use

of the resources and facilities available in the organization. Hence, productivity is one of the key elements of any institution or organization. This study aims to investigate the most important issues, challenges and factors of productivity in Urmia University from the viewpoint of faculty members.

The productivity of public organizations and their improvement is always considered as a major challenge for public management and executive managers. They are always seeking (Abtahi and Kazemi, 2000) to find solutions to improve productivity indicators in the organization. However, several definitions have been proposed for productivity, which we refer to some of them here:

1. The productivity is the ratio of outputs index to the inputs index (OECD Publications, 2011)
2. Productivity is a thinking approach which tries to improve the current status. Productivity is based on the belief that human can perform his duties and tasks more efficiently each day by taking superior results from the day before (Prokopenko, 1993).
3. Productivity is the ratio of the manufacturing system's efficiency ratio to the extent to which, one or more manufacturing factors are applied and it is a criterion to judge on the rate of change in human performance within the framework of a human-machine interaction structure. Productivity is measured at three levels: individual, group and organizational (Khaki, 2003)

### **Theoretical foundations of research:**

According to the studies and interviews conducted with the managers and deputies of different departments of the Urmia University and the knowledge of the researchers of this research from the Urmia University, four factors including costs management, human resource empowerment, organizing university activities and the university relationship with industry were identified as most important issues, challenges and factors of productivity in this university. Each of these factors included 4 items as follows:

Cost management includes the items of more monitoring on consumption of university resources, more emphasis on budgeting, applying new cost management methods (target costing), and applying funding and budget control systems.

Human resource empowerment includes the development of welfare facilities for employees, specialization in duties assigned; employment of human resources based on merit and competence and applied in-service trainings for employees. The organizing university activities included the items of mechanization of systems, organizing university facilities, outsourcing services, and development of an integrated and capable supply chain. University relationship with industry includes the allocation of adequate funds for research budget, providing applied industrial trainings, applied research at the university, and the use of incentive levers to encourage academics to conduct industry-related and applied research.

#### **1. Costs management**

In all Iran's organizations, costs management is considered as one of the main challenges of organizational productivity. In universities and higher education institutes, costs management and costs reduction are essential. Nowadays, countries are trying to recreate their higher education system in such a way to achieve the goals of development (Johnston and Marcus, 2010). However, theoretical analyses and empirical evidence of higher education issues indicate that the financing of higher education system in Iran is not consistent with the goals of development (Entezari and Mahjub, 2012).

#### **2. Human resources empowerment**

Nowadays, changes in the workplace have forced organizations to review their management systems. The empowerment of employees, as one of the key tools for leadership and management functions had made its realization possible. The goal of the organizations in implementing the process of human resource empowerment is to enhance the quality of products and accelerate the provision of services in order to meet expectations, satisfy the customer, more profit and increase the market share (Iran's Human Resources Empowerment Foundation, 2008, 13). Employees' empowerment is a set of systems, methods used to develop

the capability and competence of individuals (Carter, 2001) in growth and development of organization and human resource with the aim of improving and increasing the productivity of organizations.

Some of the factors inhibiting human resource productivity are:

1. Lack of adequate and timely support of financial managers in implementation of plans and programs in the organization
2. Lack of employment of human resources based on their merit and competence in the organization
3. Not assigning suitable job for employees
4. Lack of purposeful and specialized trainings
5. Not valuing the experience of employees in performing the duties (Haji Ahmadi, 2003)

The success of organizations does not depend on the number of human resources, but depends on the level capability of human resources. Empowerment is considered as one of the strategic tools for gaining competitive advantage (Amin, Javadian and Ramezani, 2014).

### **3. University relationship with industry**

The university relationship with the industry is an important step to move towards economic development in all countries of the world. Achieving scientific and industrial progresses largely depends on the positive interaction and relationship between these two institutions. The development of the relationship between the university and industry has always been considered by policy makers and planners to create economic, cultural and social developments. University is the main center for training human resources and the industry provides the conditions for economic and industrial development through applying knowledge of university forces (Mohseni, 2011). University uses its capability to produce science and research and the industry performs applied and manufacturing activities (Meredit and Barcel, 2008: 199-215). Technologies are progressing every day and to achieve the new technologies is a competitive advantage in the industry. University also generates knowledge and technology and thereby meets this need (Salter & Branel, 2009). Nowadays, the relationship between industry and university is necessary and it needs planning, and an organization should undertake this responsibility. This goal was achieved in Iran by establishing relationship between university and industry and holding a national congress of government, university, and industry cooperation for national development (Alizadeh, 1993). In 2009, Kau et al defined the relationship between industry and university in this way: industry provides the capital and university provides science and knowledge. This relationship promotes research, invention and technology. In addition, the government also strengthens the relationship by creating incentive systems.

Owing to government's strong dependence on oil revenues and underground reserves and the lack of competitive atmosphere in the university, industry, and other sectors of the economy of Iran, there is no optimal interaction between government, industry and the university, since the interests of these three sectors are independent and each of them has their own path; furthermore, since the government gains income from oil resources, the university uses public resources of government, and industry uses government funds and subsidies. Therefore, the problem of the lack of interaction between the university and industry in Iran is a structural problem, which depends on the economic structure of the government. Review of history of the relationship between industry and university in Iran suggests that this relationship has not been established logically and the content and direction of this relationship has not been formed well and it is not purposeful as two-way relationship between the two institutions increases innovation and productivity (Rosi, 2010).

### **4. Organizing the activities in university**

Organizing the university activities is the strategy, through which costs are cut, desired goals are achieved with specific resources, the efficiency of the university improves, and the performance of different sub-sectors and groups in order to prevent the loss of human and material capital and increase in the competitiveness, especially at the international level, is ensured.

**Research questions**

- 1) To what extent cost management and cost reduction affect the university productivity?
- 2) To what extent organizing the activities affects the university productivity?
- 3) To what extent the relationship between university and industry affects the university productivity?
- 4) To what extent empowerment of human resources affects the university productivity?
- 5) What is the ranking of factors in terms of the level of their effect on university productivity?

**Methodology**

In this section, a questionnaire was designed in four main components and 16 items based on the five-option Likert scale to collect the data. Content validity of the questionnaire was confirmed by qualified professors and experts. To determine the reliability of the questionnaire, Cronbach's alpha coefficient was used. This coefficient was calculated on 30 samples, presented in Table 1. A total of 171 questionnaires completed the questionnaire.

**Table 1:** questionnaire reliability

Five components	0.967
Total alpha coefficient of items 1 to 16	0.844

The results of this research are presented in Tables 2 and 3.

**Table 2:** Frequency distribution and percentage of answers to questionnaire questions

Component	item	Statistical index	Very high	high	moderate	low	Very low	mean
Costs management	More monitoring n consumption of university resources	f	80	56	24	4	2	4.25
		%	48.2	33.7	14.5	2.4	1.2	
	More emphasis on budgeting	f	64	56	35	11	1	4.02
		%	38.3	33.5	21	6.6	0.6	
	Applying modern methods for costs management	f	69	64	26	6	2	4.15
		%	41.3	38.3	15.6	3.6	1.2	
Applying funding and budget control systems	f	62	49	32	20	3	3.89	
	%	37.3	29.5	19.3	12	1/8		
Organizing university activities	Organizing university activities	f	50	70	33	10	5	3.89
		%	29.8	41.7	19/6	6	3	
	Outsourcing the services	f	84	37	27	13	2	4.15
		%	51.5	22.7	16.6	8	1/2	
	Development of an integrated and capable supply chain	f	67	50	30	19	2	3.96
		%	39.9	29.8	17.9	11.3	1.2	
	Mechanization of systems	f	75	63	25	3	0	4.27
		%	45.2	38	15.1	1.8	0	
Univerisyt	Providing applied trainings of industry	f	62	62	33	13	0	4.04

relationship with industry		%	37.1	37.1	18	7.8	0	
	Allocation of adequate funds for research budget	f	79	47	30	11	1	4.14
		%	47	28	17.9	6.5	0.6	
	Applied research at university	f	62	67	32	4	2	4.10
		%	37.1	40.1	19.2	2.4	1.2	
Incentive levers to encourage academics to conduct applied and industry-related research	f	59	58	26	10	10	3.90	
	%	36.2	35.6	16	6.1	6.1		
human resources empowerment	In-service trainings for employees	f	41	59	44	15	8	3.66
		%	24.6	35.3	26.3	9	4/8	
	specialty in assigning the duties	f	42	72	43	9	2	3.85
		%	25	42.9	25.6	5.4	1.2	
	Development of welfare facilities for employees with the aim of enhancing their efficiency	f	63	56	32	11	5	3.96
		%	37.7	33.5	19.2	6.6	3	
Employment of human resources based on their merit and competence	f	30	76	50	6	3	3.75	
	%	18.2	46.1	30.3	3.6	1.8		

**Table 3:** mean of factors affecting the productivity in university

Statistical indices	mean
Organizing the university activities	4.067
Empowerment of human resources	3.805
Costs management	4.077
Industry relationship with university	4.045

The results of Table 3 show that among the factors studied, the costs management factor had the highest mean (4.077) and the human resources empowerment had the lowest mean (3.805).

Table 2 also shows that among the items studied in the costs management factor, the component of more monitoring of consumption of university resources had the highest mean score. Assigning the highest mean score to more monitoring on consumption of university resources suggests the importance of management of university financial resources so that it can be stated the management of university financial resources is more important than other options in costs management and productivity of the organization since proper management of financial resources will automatically avoid unnecessary costs.

In the organizing the university activities, the item of mechanization of systems had the highest mean which might be due to the fact that duplications and parallel activities and presence of cumbersome rules and regulations have disrupted the administrative system and bureaucracy. Moreover, equipping the university with advanced technology and using integrated software and avoiding the use of scattered software will facilitate the process of doing the affairs and increase productivity in the university.

Table 2 also shows that among the items studied in the university relation with the industry factor, "the item of allocation of adequate funds for the research budget had the highest mean score, indicating the importance of the role of research budget funding for the university relationship with industry. Based on the Table 2,

among the items studied, in the human resources empowerment factor, the development of welfare facilities for employees with the aim of enhancing their efficiency had the highest mean. Development of welfare facilities can not only be considered as a type of investment for the university, but also can play a role in enhancing the quality of human capital of the university, as Dulan and Schuler (2014) recommended the attraction and retention of efficient human resources through using reward systems.

### **Conclusion**

The results of this study suggest that four factors of costs management, organizing university activities, university relationship with industry, and human resources empowerment were effective in productivity of organization from the viewpoint of the faculty members of university. Additionally, the results of this study suggest that costs management, organizing of university activities, university relationship with industry, and human resources empowerment ranked first to fourth, respectively, in terms of their effect on productivity in Urmia University, that is, costs management has the highest effect and human resources empowerment had the lowest effect on productivity.

### **Recommended Strategies:**

In this section, solutions based on research results are recommended:

- 1) Applying modern cost management approaches (target costing) and more monitoring on consumption of university resources by controlling the consistency of results with consumed resources.
- 2) Facilitating the administrative affairs through integrated mechanization systems at all university levels.
- 3) Implementing welfare development plans for employees with the aim of enhancing their efficiency
- 4) University managers' attention to implementation of value engineering methods for identifying and eliminating duplication and parallel activities without value added
- 5) Allocation of adequate funds for research budget, conducting applied research and using incentive levers to encourage academics for industrial research.
- 6) Increasing the purposeful visits to industrial centers and more relationship between academics and industry.

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