

*Full Length Research Paper*

# **An examination of the relationship between participatory management and employees' productivity of Agricultural Extension Management: A case study of Ilam, Iran**

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The main purpose of this study is to determine the relationship between participatory management and employees' productivity of Agricultural Extension Management. This research was carried out based on a descriptive-survey research method. The statistical society of this study comprised all staff of the Agricultural Extension Management of Ilam Province, Iran. A sample size of 37 staff was chosen with the help of census sampling. The research tool was a questionnaire developed from the research and theoretical literature of the interviews conducted with experts, and this tool was used to determine the validity of the panel of experts. To ensure the reliability of the study tools, 10 questionnaires were completed and Cronbach's alpha was used to calculate about 90% of the data obtained. Due to the nature of the data, correlation analysis technique in SPSS software was used to analyze them. The result of this study showed that there is a considerable meaningful relationship between the variables of participatory management and employees' productivity of Agricultural Extension Management. The result of the multi regression analysis carried out in a stepwise style showed that variables such as increasing responsibility, increasing innovation, reduction of administration costs, and increasing efficiency were able to explain 99% variation of employees' productivity of Agricultural Extension Management.

**Key words:** Participatory management, productivity, participation.

## **INTRODUCTION**

Participatory management is a mental and cultural phenomenon that provides resistance to traditional forms of mental phenomena, which make marginalized people tend to be committed to group works in organizations. Only in such situation, can the silent sounds made by employees get to the managers of organizations. In today's world, management is the most important factor for growth, development, and demise of organizations.

Strategic decisions made by the managers can determine the status of the organization.

Participatory management system has been explained as an independent system or as part of a comprehensive quality management system (Amini, 2007). According to many experts in management, correct and effective use of participatory management has been making great progress in the field of business, particularly in the South-east Asian countries.

Nabavi (2011), in his study carried out in Iran, opined that many experts of Management Science, due to problems such as low labor productivity, and low

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motivation of manpower in Iranian Organizations, believe that participatory management can be used to tackle the problems faced in these organizations.

Amini (2007), in his study, said that the limitation of financial resources and manpower in organizations made the managers of these organizations to carry out necessary actions to increase productivity and organizational development (Abaszadegan, 2007). It is clear that the attempt made to increase productivity, achieve development and use optimal resources is an essential element in the administration of the organizations (Rahnavard, 2010).

Several strategies can be used to increase productivity and organizational development; one of such suitable strategies is participatory management (Zandi, 2010). Many researches and studies carried out on participatory management showed that when there is participation in organizations, the employees see themselves as respected, valued, efficient and effective personnel; in this situation, they are a part of the system. One of the important and valuable aspects of participation is that it can make employees develop more effort, creativity, and innovative power and construction.

Participatory management, by involving employees in decision making, helps to increase productivity, improve quality and reduce negative resistance, such as absenteeism, conflict, stress, delay and less work, and overall increase productivity in organizations (Tosi, 2007). The main question of the current study is as follows: Is there any relationship between participatory management and employees' productivity of Agricultural Extension Management? Thus, this study was conducted to examine the relationship between participatory management and employees' productivity of Agricultural Extension Management of Ilam province.

In the research of Mirkamali (2005), the correlation between management style and the mental health of staff was confirmed. In the research of Boromand (2001), barriers of participation were divided into four groups: incorrect assumptions about participation, lack of employee involvement in the organization, cultural barriers, and organizational barriers (Golestan, 1999).

The main results of the participatory management system is expressed as follows: Increasing levels of job motivation, increasing levels of mental health, increasing levels of knowledge, information and continuous education, increasing levels of creativity and innovation, and increasing levels of job satisfaction.

The finding of Nami's (2004) research showed that there are no significant differences between the method of center management and the rate of the motivational level of informal groups. Graham (1993) in his research came to the conclusion that the use of participatory management sustained effects on employees' attitudes and increased staff productivity in organizations. Studies of Jahanian (2009) showed that the usage of participatory management depends on the ability level of employees,

the time required, and the nature of the contingency approach. The main purpose of this study is to determine the relationship between participatory management and employees' productivity of Agricultural Extension Management. The specific objectives of this study are:

1. To determine the relationship between participatory management and employees' increasing performance.
2. To determine the relationship between participatory management and reduction of administrative staff costs.
3. To determine the relationship between participatory management and employees' increasing innovation.
4. To determine the relationship between participatory management and employees' increasing responsibilities.
5. To determine the anticipated contribution of each independent variable to the dependent variable's variance (Regression analysis).

## MATERIALS AND METHODS

This research was performed based on a descriptive-survey research method. The statistical society of this study comprised all staff of the Agricultural Extension Management of Ilam Province. A sample size of 37 staff was chosen with the help of census sampling. The research tool was a questionnaire developed from the research and theoretical literature of the interviews conducted with experts, and this tool was used to determine the validity of the panel of experts.

The questionnaire used in this study consisted of two parts. The first part comprised questions about individual factors of employees (age, sex, educational level, work experience, etc). The second part comprised 30 close questions regarding the measurement of the relationship between participatory management and employees' productivity. To ensure reliability of the study tools, 10 questionnaires were completed and Cronbach's alpha was used to calculate about 90% of the data obtained. Due to the nature of the data, Correlation analysis technique in SPSS software was used to analyze them.

## RESULTS AND DISCUSSION

### Correlation studies

In order to study the relationships between participatory management and employees' productivity of Agricultural Extension Management, the Spearman ranking correlation factor was used. The results are shown in Table 1.

The result of Table 1 shows that there is a considerable meaningful relationship between the variables of participatory management and employees' productivity of Agricultural Extension Management.

### Multiple regression analysis

At this stage, to assess the collective role played by the independent variables on the dependent variables, multiple regression technique (Stepwise style) was used.

**Table 1.** Relationships between the research variables.

S/N	First variable	Second variable	r	p
1	Increasing efficiency	Employees' productivity	0.79**	0.000
2	Reduction of administration costs	Employees' productivity	0.59**	0.000
3	Increasing innovation	Employees' productivity	0.80**	0.000
4	Increasing responsibility	Employees' productivity	0.79**	0.000

**Table 2.** Summary of regression models.

Model	R <sup>2</sup>	Adjusted R <sup>2</sup>	Standard error of estimation	R <sup>2</sup> change	F change	Sig. F change	Durbin Watson
1	0.808	0.802	0.209	0.808	147.26	0.000	
2	0.924	0.920	0.133	0.116	52.04	0.000	1.82
3	0.974	0.972	0.079	0.050	63.57	0.000	
4	1.000	1.000	0.000	0.026			

**Table 3.** ANOVA.

S/N	Model	Sum of square	df	Mean square	F	Sig
1	Regression	8.43	1	6.43		
	Residual	1.53	35	0.044	147.26	0.000
	Total	7.96	36			
2	Regression	7.36	2	3.68		
	Residual	0.604	34	0.018	207.03	0.000
	Total	7.96	36			
3	Regression	7.75	3	2.58		
	Residual	0.207	33	0.006	413.15	0.000
	Total	7.96	36			
4	Regression	7.96	4	1.99		
	Residual	0.000	32	0.000		
	Total	7.96	36			

The Stepwise style is the method used to enter most of the variables into the regression equation, and this continues until the error reaches a significant test of 5%. Tables 2 to 5 examined the assumptions using linear regression (such as R square change, F Change, Sig. F change, Durbin Watson, Sig. F test, tolerance, VIF, collinearity diagnostics). In this research, a histogram graph was used to show normality errors (Figure 1). As shown in Figure 1 that the distribution of errors is normal, it can thus be concluded that the regression equation can be used in the following steps:

**First step:** At this stage, the first variable entered into the regression equation was the 'increasing responsibility' variable. This means that the adaptability variable was the most influential on the changes in the dependent

variable. At this stage  $r = 0.89$ ,  $R^2 = 0.80$ , and  $R^2$  Adjust = 0.80. So, it can be said that the 'increasing responsibility' variable alone created about 89% of the variation in the dependent variable (employees' productivity). As such, the regression equation in the first step is as follows:

$$y = 0.66x_1 + 1.37$$

**Last step:** At this point, after the variables (increasing responsibility, increasing innovation, and reduction of administration costs) have been entered into the regression equation, the 'increasing efficiency' variable is then entered into the regression equation. At this stage,  $r = 1.00$ ,  $R^2 = 1.00$ ,  $R^2$  adjust = 1.00). As such, the regression equation in the last step is as follows:

**Table 4.** Coefficients of the variables entered into the regression equation.

Model	Variable	B	Standard error of B	Beta	T	Sig.	Tolerance	VIF
1	Increasing responsibility	0.66	0.055	0.899	12.13	0.000	1.00	1.00
	Constant	1.37	0.24	-	5.68	0.000		
2	Increasing responsibility	0.436	0.047	0.592	9.30	0.000	0.98	1.00
	Increasing innovation	0.339	0.047	0.459	7.21	0.000	0.98	1.00
3	Constant	0.930	0.166	-	5.60	0.000		
	Increasing responsibility	0.321	0.031	0.436	10.24	0.004	0.96	1.00
	Increasing innovation	0.298	0.028	0.403	10.50	0.000	0.97	1.00
	Reduction of administration costs	0.290	0.036	0.298	7.97	0.000	0.97	1.00
4	Constant	0.375	0.121	-	3.11	0.000		
	Increasing responsibility	0.240	0.000	0.325	2.43	1.000	0.98	1.00
	Increasing innovation	0.240	0.000	0.325	2.77	0.000	0.98	1.00
	Reduction of administration costs	0.240	0.000	0.247	2.23	0.000	0.97	1.00
	Increasing efficiency	0.280	0.000	0.265	2.001	0.000	0.97	1.00
	Constant	2.16	0.000	-	.000	0.000		

**Table 5.** Collinearity diagnostics<sup>a</sup>.

Model	Dimension	Eigen Value	Condition Index	Constant	Increasing responsibility	Increasing innovation	Reduce of Administration costs	Increasing the efficiency
1	1	1.99	1.00	0.01	0.01			
	2	0.01	8.88	0.99	0.99			
2	1	2.98	1.00	0.00	0.00	0.00		
	2	0.012	9.08	0.99	0.12	0.22		
	3	0.007	10.66	0.01	0.88	0.78		
3	1	3.97	1.00	0.00	0.00	0.00	0.00	
	2	0.012	10.78	0.49	0.10	0.29	0.03	
	3	0.007	11.22	0.014	0.42	0.67	0.12	
	4	0.005	12.36	0.37	0.47	0.04	0.85	
4	1	4.97	1.00	0.00	0.00	0.00	0.00	0.00
	2	0.012	11.12	0.35	0.09	0.26	0.02	0.00
	3	0.007	12.8	0.11	0.35	0.60	0.11	0.00
	4	0.005	13.11	0.17	0.28	0.06	0.87	0.04
	5	0.003	13.99	0.34	0.29	0.07	0.00	0.96

$$y = 0.24x_1 + 0.24x_2 + 0.24x_3 + 0.28x_4 + 2.16.$$

**Conclusion**

In this study, with the help of the Correlation analysis technique, we investigated the relationship between participatory management and employees' productivity of Agricultural Extension Management. The result of this table shows that there is a considerable meaningful relationship between the variables of participatory management and employees' productivity of Agricultural Extension Management. The result of the Correlation analysis showed that there is a significant relationship

between these variables (increasing responsibility, increasing innovation, reduction of administration costs, and increasing efficiency) and strategic planning, but there is no significant relationship between adaptability and employees' productivity of Agricultural Extension Management.

The results of this survey confirm those of Golestan (1999), Nami (2004), Boromand (2001), Mirkamali (2005), Jahanian (2009), and Graham (1993). The result of the Multi regression analysis carried out in a stepwise style showed that variables such as increasing responsibility, increasing innovation, reduction of administration costs, and increasing efficiency were able to explain 99% variation of employees' productivity of

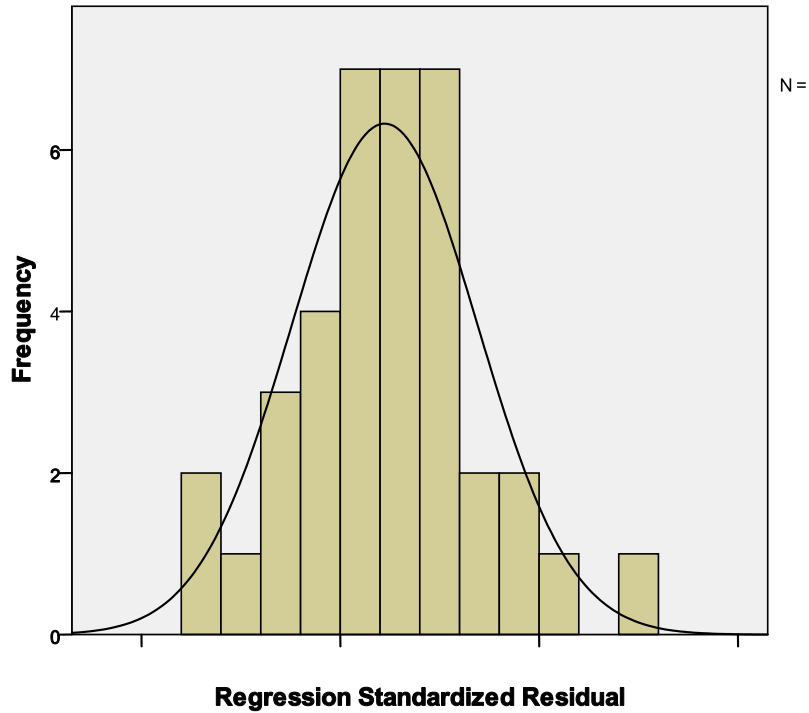


Figure 1. Histogram graph.

Agricultural Extension Management.

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