

# THE ROLE OF MANPOWER IN THE SUCCESS OF IRAN'S POULTRY GROWERS COOPERATIVES

RAMEZANI M., AMINI A. M., RAISSI G. A.

## Abstract

*This paper strives to study the role of manpower in the success of Iran's poultry growers cooperatives. The empirical study covers 713 members, managers and board presidents. The results show that Iran's poultry growers cooperatives were not able to achieve their planned objectives. According to the findings of this study, the level of training, member participation in the cooperative, technical skills of the board presidents and managers, and knowledge of cooperative principles were low in the cases studied. The results of path analysis showed that managers' knowledge of cooperative principles, strong adherence to cooperative principles, member participation in the cooperative, technical skills of board presidents and managers, selection criteria for the managers, quality and quantity of training programs, and level of education are positively correlated with the success of agricultural cooperatives. The most important obstacle limiting the success of poultry growers cooperatives is exploitation of cooperatives for personal interests.*

**Key words:** agricultural cooperatives, manpower, success of cooperatives

## INTRODUCTION

The human element is regarded as the designer and cause of changes in a firm. In other words, man is considered to be the unparalleled capital in cooperatives (Shahbazi, 2006). The socio-economic development of a nation depends on its production capacity. The two important factors that play a crucial role in shaping this production capacity are physical resources and labor. Investment in labor is the cause and the indispensable element of development and evolution of the physical resources (Shirani, 1989). A glance at human economic thought reveals that the founders of different economic theories or schools as well as their subscribers have placed great emphasis on the role of labor in development programs. The theory maintaining that investment in manpower brings about economic growth goes back to Adam Smith and the classical economists (Amini et al., 2002). Today, most economists consider workforce as the most important factor involved in production and consider raw materials, capital, and natural resources as only subordinate to the human element. Man gathers and concentrates his assets, uses natural resources, and establishes social, economic, and political institutions to contribute to national development. Countries incapable of enhancing their labor's skills and know-how, and those failing to exploit these resources effectively towards their national economy will fail in their development plans (Shahbazi, 2006).

Today, labor management is of crucial importance in the process of development and due to the complex issues raised in this field, achieving development goals requires concerted efforts by many individuals (Shirani, 1989). Along these lines, companies have come to be regarded as frameworks for cooperation of individuals and it has

been established that such institutions play an effective role in development. Success of such institutions greatly draws upon the skills of the workforce involved. This paper is an attempt to study the role of manpower in the success of agricultural cooperatives. First, we will investigate the factors involved in the success or failure of cooperatives, and we will finally present a practical model for increasing the productivity of cooperatives. Specific objectives of the present research are as follows:

1. Evaluating the success of Iran's poultry growers cooperatives in terms of achieving their predetermined objectives;
2. Identifying the knowledge and skills of cooperative members and investigating the effect(s) of member quality on the success of Iran's poultry growers cooperatives;
3. Identifying the role of managers in the firm and its relevant impacts;
4. Developing practical approaches and models for lifting the barriers limiting the success of Iran's poultry growers cooperatives.

The results from the studies by Aghajani Varzaneh (2001), Amini and Safari Shali (2002), Amini and Ramezani (2006 a & b), Darvishinia (2000), Sar Sakhti Erqui (1995) and Safari Shali (2001), that evaluated the performance of agricultural cooperatives and the factors involved, reveal that such cooperatives are generally unsuccessful. Based on these studies, members' understanding of cooperation, knowledge of cooperative principles, participation in the cooperative

activities, and members' training have had a significantly positive role in increasing the efficiency and improving upon the performance of cooperatives. Erqui (1995) emphasizes that the levels of income, literacy, type of previous job, and concept of managers about authority affect their performance while such individual factors as management experience and manager's age have no bearing.

John et al. (2001) evaluated three principles of minimum profit & better services, freedom of membership, and observance of equity fairness amongst the important factors affecting the success of cooperatives. Carlo et al. (2000) identified individualistic morale, lack of member participation, poor management, irresponsibility of members, financial problems, lack of information about the members, non-ethical issues, lack of understanding of cooperative principles, weaknesses in rules and regulations, and inefficiency in competition with other firms as the limiting factors in the success of agricultural cooperatives. Bhuyan (2000) mentioned lack of understanding of cooperation on the part of members, high levels of executive expenditures, inequality in paying attention to members' interests, high expectations of members from cooperatives, and lack of powerful managers as the main barriers hindering the development of agricultural cooperatives. Results released by Australian Organization of Agriculture Studies show that the level of member participation in the cooperative has a direct relation with success of cooperatives. On the other hand, level of member participation in the cooperative is related to the level of understanding of cooperation principles, amount of social activities, influence of the members, impartiality of cooperatives, and level of satisfaction of the cooperative members and employees (AAC, 1988).

**MATERIALS AND METHODOLOGY**

pose of this survey research is to study the role of manpower in the success of Iran's poultry growers cooperatives. This article is concerned with the

“management by objective approach (MBO)” to evaluate the performance of agricultural cooperatives (Khamoushi, 2003). This evaluation is a complex task that must be undertaken by the company members and managers. Cluster sampling has been used for this purpose. The sample consists of 50 cooperatives from 10 provinces of the originally 28 provinces. A lues-tionnaire was developed and used to collect data from agricultural cooperative managers, members, and accountants concerning various aspects of the cooperative environment.

Due to the limited statistical population of managers, we decided to include views by all executive managers and board members in our survey but as some were not available or denied to participate in the survey, we were left with only 153 managers, accounting for only 67% of the statistical population, whose views could be used in this survey.

Cochran's formula was applied at a reliability level of 0.95, probability of q = 0.5, and an accuracy level of d = 0.04 to determine the sample size needed. Then, the sample size was adjusted using the Yeats correction factor (Cochran, 1976). From 183 agricultural cooperatives with 19 216 members, 50 cooperatives and 502 members were selected. The multi-layer sampling approach was used in the selection of companies and members (Jolliffe, 1986).

Data was collected through observations, interviews, and statistical surveys. Three questionnaires were designed and used to collect data from agricultural cooperative managers, members, and accountants. Also a model was developed to relate the various characteristics of the manpower as the independent variables affecting the success of agricultural cooperatives, which was designated as the dependent variable. Each section of the questionnaire comprising a number of questions was used to evaluate one aspect of the cooperative environment. Cronbach's Alpha and KMO coefficients wee used to assess the consistency and reliability of the questionnaires (Sarmad et al., 2000). Table 1 presents the results.

**Tab. 1:** Internal consistency & reliability of the questionnaire used

Concepts	Number of Questions		Reliability		Consistency	
	Members	Managers	Members	Managers	Members	Managers
Member participation in the cooperative affairs	6	7	0.5085	0.8279	0.602	0.824
Technical skills of managers	5	3	0.7988	0.7665	0.694	0.681
Interpersonal skills of managers	3	–	0.7215	–	0.500	–
Training	3	3	0.8525	0.6122	0.825	0.500
Level of Success	17	17	0.6805	0.8505	0.800	0.787

A high level of internal consistency and reliability was obtained for the questionnaires used in this study.

A number of the questions were administered using the Analytic Hierarchy Process (AHP). For this purpose, the weights of questions were calculated using the factor analysis method after normalization. Then, the score of each question was multiplied by its weight. Finally, the index was determined through adding all the scores (Diakoulaki et al., 1995).

In this study, some of the various causes reported in the literature for the success of poultry growers cooperation were combined in a backward regression analysis to determine if the proposed behavioral causes could be empirically verified. The level of success of the cooperatives was the dependent variable in the regression analysis while the independent variables affect the success of poultry growers cooperatives.

**RESULTS & FINDINGS**

In the section, we will first introduce the method and procedure used for measuring the dependent variable (success level of the cooperatives under study), then the results from investigation of the independent variables will be discussed and, finally, the relations between the dependent and independent variables will be established through route analysis test.

**A) Studying the level of success of poultry growers cooperatives**

As a first step, the achievement of the cooperatives' objectives as declared in their Statutes and Constitution was evaluated as a dependent variable. Members and managers were asked to express their views on the five streams examined including procurement of production supplies required by members, market regulation, provision of consultancy, economic, and educational services. The obtained results are shown in Table (2).

**Tab. 2:** Evaluating the services offered to members

	Providing production supplies		Market regulation		Consultancy		Economic services		Training	
	No	Per	No	Per	No	Per	No	Per	No	Per
Poor/Very poor	448	68.4	566	84.4	538	82.1	527	80.5	476	72.7
Fair	180	27.5	73	11.2	75	11.5	105	16	135	20.6
Good/Excellent	27	4.1	16	2.4	42	6.4	33	3.5	44	6.7
<b>Total</b>	<b>655</b>	<b>100</b>	<b>655</b>	<b>100</b>	<b>655</b>	<b>100</b>	<b>655</b>	<b>100</b>	<b>655</b>	<b>100</b>

Based on the data in Table 2, the majority of members and managers considered the performance of the cooperatives in those fields as poor and very poor with only a minority finding it good or very good. The level

of success of the agricultural cooperatives was assessed using the overall weight of the above factors. The weight results are given in Table 3.

**Tab. 3:** Evaluating the success of poultry growers cooperatives

Level of Success	Members		Board of Directors		Managers		Total	
	No	Per	No	Per	No	Per	No	Per
Low/Very low	450	89.6	72	63.2	26	66.7	548	83.7
Moderate	47	9.4	38	33.3	11	28.2	96	14.7
High & Very High	5	1	4	3.5	2	5.1	11	1.6
<b>Total</b>	<b>502</b>	<b>100</b>	<b>114</b>	<b>100</b>	<b>39</b>	<b>100</b>	<b>655</b>	<b>100</b>

Based on the data in Table 3, 83.7% of the members and managers considered the success of cooperatives in achieving their objectives to be low or very low. Since level of success of cooperatives relies heavily on the performance of managers, it seems that managers have been performing loosely and irresponsibly; the majority of members and managers assessed cooperatives as unsuccessful. Results of the mean comparison test

showed that such firms have mostly concentrated on providing deposits for the members. Members and managers considered the educational, economic and consultancy services as well as market regulation by their cooperatives to be very poor. Using the cluster test, poultry growers cooperatives are categorized into five groups according to their success level. The results are presented in Table 4.

**Tab. 4. :** Categories of cooperatives according to the their success

Categories	Number of cooperatives in the category	Per %	Mean
<b>A</b>	4	8	65.19
<b>B</b>	13	26	51.47
<b>C</b>	18	36	47.42
<b>D</b>	9	18	37.92
<b>E</b>	6	12	28.75

Based on this test, 8% of the cooperatives studied, including cooperatives in Tehran Province, Shahreray, Tehran and suburbs, and Kashan, enjoyed a higher level of success compared to those in other regions. Around 12% of the cooperatives including Sia cooperatives of Assad-Abad, Babolsar and the suburbs, Khomeinishahr, Rasan of Hamedan, and Nahavand were considered very poor in terms of success level.

**B) Independent variables in the poultry growers cooperatives**

Having evaluated the success level of cooperatives, determinants of the dependent variable were studied. In the forthcoming paragraphs, first the independent variables will be described followed by a discussion of their influence on the success of Iran’s poultry growers cooperatives. Finally, the results will be presented in Table (5).

**Tab. 5:** Frequency distribution of independent variables

Major Concepts	Evaluation	Members		Board of Directors		Managers		Total	
		No	Per	No	Per	No	Per	No	Per
<b>Education</b>	<b>Illiterate</b>	23	4.6	8	7	0	0	31	4.7
	<b>Elementary &amp; Guidance School</b>	193	38.3	30	26.3	3	7.7	226	34.5
	<b>High School &amp; High-School Diploma</b>	209	14.6	55	48.2	19	48.7	283	43.2
	Vocational Diploma & BS	70	14	16	14	14	35.9	100	15.3
	MS & Higher	8	1.5	5	4.4	2	5.1	15	2.3
<b>Understanding cooperative principles</b>	None	232	46.2	49	43	19	48.7	300	45.8
	Poor	198	39.4	30	26.3	12	30.8	240	36.6
	Mediocre	55	11	28	24.6	6	15.4	89	13.6
	High	17	3.4	7	6.1	2	5.1	26	4
<b>Member participation in the cooperative affairs</b>	Low or Very Low	131	26.1	14	12.2	4	10.3	149	22.7
	Mediocre	280	55.8	59	51.8	17	43.6	356	54.4
	High & Very High	91	18.1	41	36	18	46.1	150	22.9
<b>Technical Skills of Managers *</b>	Low or Very Low	98	19.5	14	12.3	9	23.1	121	18.5
	Moderate	244	48.6	53	46.5	11	28.2	308	47
	High & Very High	160	31.9	47	41.2	19	48.7	226	34.5
<b>Interpersonal Skills of Managers</b>	Poor or Very Poor	75	14.9	-	-	-	-	-	-
	Moderate	228	45.4	-	-	-	-	-	-
	High & Very High	199	39.6	-	-	-	-	-	-
<b>Training</b>	No training received	271	54	84	73.7	30	76.9	385	58.8
	Training received	231	46	30	26.3	9	23.1	270	41.2
<b>Training Quality</b>	Poor or Very Poor	65	28.2	-	-	-	-	65	24.1
	Fair	77	33.3	4	13.3	2	22.2	83	30.7
	High & Very High	89	38.5	26	86.7	7	77.8	122	45.2

\* Technical skills of the managers have been evaluated from the member’s point of view

The statistical tests reported in Table 5 show that a strong correlation between the said independent variables and the success of a cooperative is statistically significant at 99% level. Characteristically, poultry growers are not highly educated, although their business requires specialization in their field. Also, the comparison test showed that managers, compared to members, were better educated; in other words, their level of education was a significant factor in their election as managers.

Overall, 45.8% of members and managers had no understanding of cooperative principles while 36.6% of them were considered to have a poor understanding. Managers as compared to members had a better knowledge of cooperative principles; however, the level of knowledge of cooperative principles among both members and managers was very poor.

Members and managers considered the level of participation in the cooperative's affairs and technical skills of managers as mediocre. Generally, managers considered the level of member participation in the

cooperative affairs to be higher than themselves. The members evaluated the managers in terms of their interpersonal skills. Based on the results obtained, members assessed managerial skills of the managers as high or very high.

The results showed that generally 54% of members and 73.7% of managers had received no education at all. In evaluating educational background, special weight has been given to managers. Educated individuals were asked to evaluate the quality of the training courses offered. On the whole, 24.1% of members and managers considered the quality of training offered as poor or very poor, 30.7% as fair, and 45.2% as good or very good. Satisfaction of members of the course quality was less than that of managers, which calls for consideration.

Profitability of cooperatives for members, managers and other organizations was evaluated as one of the factors affecting success of cooperatives from the viewpoint of both members and managers. The results are presented in Table (6).

**Tab. 6:** Frequency distribution of profitability for members, managers, and other parties

Profitability for:	Members		Managers		Organizations	
	Num	Per	Num	Per	Num	Per
Low or Very Low	32	4.9	10	1.5	15	2.3
Moderate	111	16.9	104	15.9	124	18.9
High & Very High	39	78.2	541	82.6	114	78.8
Total	512	100	655	100	516	100

The results indicate that 78.2%, 82.6%, and 78.8% of the three respondent groups considered the benefits of the cooperatives for the members, managers and other state organizations to be high or very high while 4.6%, 1.5% and 2.3% in each category considered it to be low or very low. The rest considered the benefits to be moderate.

**C) Investigation of the relationships between independent variables and cooperatives' success**

To study the effects of independent variables on the

success of poultry growers cooperatives (the dependent variable), the path analysis and multivariate regression technique were employed. The independent variables that could theoretically affect the dependent variable were tested in the model, and their relationships with the success of agricultural cooperatives were studied. In the subsequent phases, the relationship between the intermediate independent variables and the other factors was studied so that the direct and indirect impacts of the effective variables could be evaluated. The results are presented in Table (7).

Tab. 7: Multivariate regression of determinants of cooperatives success

Dependent Variable	Success	Understanding	Participation	Technical Skills	Interpersonal Skills
Managerial & technical criteria used in electing managers	2.631**	-	-	0.414***	-
Relevant interpersonal criteria used in electing managers	0.890*	-	-	-	0.079**
Managers' technical skills	5.767***	-	1.097**	-	-
Managers' interpersonal skills	2.883*	-	0.362***	-	-
Training programs	3.182***	-	-	-	-
Number of training courses offered	1.418**	-	-	-	-
Understanding of cooperative principles	4.028***	-	--	-	-
Member participation in the cooperative affairs	1.249**	-	-	-	-
Using cooperatives for personal interests	-1.883**	-	-	-	-
Duration of membership		0.223***	0.985***	-	-
Informal education		0.175***	-	-	-
Age (Experience)		0.096*	-	-	0.367**
Constant	18.274**	0.485***	15.448***	26.431***	9.812***
R	0.671	0.408	0.541	0.146	0.163
R <sup>2</sup>	0.451	0.166	0.292	0.021	0.026
F	42.68***	21.568***	21.568***	1.881***	4.072***

\*, \*\* & \*\*\* Significant at 90%, 95% & 99%, respectively

In the first column of Table 7, those variables are presented that directly affect the goal variable. The Fisher's coefficient was at a reliability level of 99%, and indicates a completely significant relation holding between the remaining independent variables and the dependent one.

Taken together, the remaining variables in the model explain much of the variation observed in the success levels of poultry growers cooperatives, with a significance rate of 99%. The correlation coefficient (R = 0.671) shows a rather strong correlation between the independent and dependent variables. The coefficient of determination R<sup>2</sup> = 0.451 as well states the moderate variance of the dependent variable which is explained by the independent variables introduced into the model. Technical skills of the managers, knowledge and understanding of cooperative principles, training programs, interpersonal skills of the managers, observance of managerial criteria in electing managers, number of training courses offered, member participation in cooperative's affairs, and observance of interpersonal criteria in electing managers had positive effects on the

success of poultry growers cooperatives in the proposed model. Also, managers' exploitation of the cooperative for personal interests was recognized as the most important barrier against the success of cooperatives.

The test results summarized in Table 7 show that each of the intermediate factors is in turn affected by some other variable. In this study, we have evaluated the effect of each factor on the above variables. Understanding of cooperative principles depends on the level of education and membership duration in the cooperative. Those members with a long record of membership enjoy a higher level of understanding. Informal training had no effect on members understanding of the principles from which it can be concluded that the training programs offered were not of high quality. Member's age was also effective in their understanding of the principles, which could be attributed to the experience of older members. Member participation in the cooperative affairs can be affected by interpersonal and technical skills of managers and by the individual member's past record of membership in the cooperative. A major part of member participation

in the cooperative is realized through managers' technical and managerial skills. Past record of membership is an expression of member experience with cooperatives. This means that the level of member participation depends on their past record of membership leading to better familiarity with cooperative rules and regulations. Also, technical managerial skills of managers depend on the level of member care for technical criteria in electing managers. Although the value of R<sup>2</sup> shows a major portion of the variance in the independent variable not to be accounted for by this variable, evaluation of the variables affecting

the manager technical skills was excluded from this study due to space limitations; however, the above equation was only introduced to show that a relation existed between the two variables. Interpersonal skills of managers are also affected by the two variables of age and importance attached by members to interpersonal criteria while electing managers.

To understand the effects of each independent variable on the success of poultry growers cooperatives, the direct effect of each factor is separately presented in Table 8 whereby the most effective factors are revealed.

**Tab. 8:** Magnitude of direct & indirect effects of independent variables on the dependent variable

Variable	Direct Effects	Indirect Effects	Total
Observance of technical criteria in electing managers	.166	.124*.400+.124*.196*.145	0.219
Observance of interpersonal criteria in selecting managers	.093	.120*.172+.120*.132*.145	0.116
Managerial skills	.400	.196*.145	0.428
Managers' interpersonal skills	.166	.132*.145	0.185
Exploiting cooperatives for personal interests	.133	-----	0.133
Training	.429		0.429
Number of training courses	.073	-----	0.073
Understanding of cooperativ preinciples	.149	-----	0.149
Member' participation in cooperative affairs	.145	-----	0.145
Age (Experience)	-----	.119*.149+.113*.166+.113*.132*.145	0.039
Duration of membership	-----	.435*.149	0.065
Education	-----	.228*.149	0.034

The coefficients of effectiveness presented in Table 8 show that training offered, technical skills of elected managers, observance of technical criteria in electing managers, and Interpersonal skills of elected managers with values of .429, .428, .219, and .185, respectively, are considered to be the most effective factors in the success of cooperatives. Also, exploiting cooperatives for personal interests by the managers was identified as one of the most crucial factors contributing to cooperative failures. In the light of the above considerations, the most important results obtained from this study can be summarized as follows:

1. The poultry growers cooperatives did not perform well in achieving their objectives. Our results are in good agreement with those from studies by Karami (2006), Amini & Ramezani (2006 a & b), Safavi Shali

(2001), Aghajani (2001) and Sarsakhti (1995) carried out on different cooperatives in Iran.

- Members and managers of firms are very little informed about the cooperative objectives and principles. This factor, with a coefficient of 4.028 has a positive effect on the success of cooperatives. These results are confirmed by investigations by Safari Shali (2001) and Aghajani (2001).
- Member participation in cooperative affairs was considered by respondents to be moderate. This factor, with a coefficient of 1.249, has a direct effect on the success of cooperatives. Results from the route analysis show that member participation has a close correlation with interpersonal and managerial skills of managers.
- Interpersonal skills of elected managers were considered to be higher than their technical skills by

the respondents in this survey. Results from the route analysis show that interpersonal and technical skills of managers directly affect the dependent variable with a coefficients of .428 and .185, respectively. These variables produce a positive effect on the success of agricultural cooperatives indirectly through member participation. Also, electing managers with due regard to interpersonal and technical criteria, with coefficients of .219 and .116, respectively, positively affect the success of cooperatives through the interpersonal and technical skills of managers.

5. Exploiting cooperatives toward personal interests by the managers, which is the most important limiting factor, with a coefficient of 1.883, had a negative effect on the success of cooperatives.
6. 54% of members and 74% of managers had received no training. Results from route analysis showed that training quality with a coefficient of 4.82 has a positive effect on the success of cooperatives. The results obtained here agree well with those obtained by Amini & Ramezani (2006 a,b), Karami (2006), Amini & Safari Shali (2002), Safari Shali (2001), Aghajani (2001) and Sarsakhti (1995).
7. Members' level of education was found to be below high school diploma, which was assessed as inappropriate for this type of business. Education positively affects the success of cooperatives with a coefficient of .034 through the intermediate factor of understanding of principles.

### CONCLUSION

The following recommendations are in place in view of the results obtained from this study if improvements are sought upon poultry growers cooperatives:

- Given the poor quality of services offered by the staff involved in poultry growers cooperatives, and considering the technical nature of the business, it is essential to define long-term strategies with the objective of improving upon staff quality and skills. For this purpose, continuous education programs based on cooperative requirements will be helpful.
- Member participation in the process of decision-making may involve countless benefits for the cooperatives. In order to enhance member participation in cooperative affairs, suitable approaches need to be explored.
- The success of cooperatives depends on skills of managers. Since the managers lack adequate technical skills and some even have poor interpersonal skills, training programs may be designed and used to ensure the success of cooperatives.
- Based on the results of this study, member participation depends on managerial skills of cooperative managers. It is, therefore, necessary to formulate and employ modern managerial procedures so that managers could encourage member participation in cooperative affairs in their attempts to achieve the objectives of their respective cooperatives.

### REFERENCES

- Aghajani Varzaneh M. (2001): Studying and evaluating the activities of rural productive cooperatives in Isfahan (1972–92). Unpublished manuscript, College of Agriculture, Isfahan University of Technology.
- Amini A.M., Safari Shali R. (2002): Evaluating the effects of trainings on the success of poultry cooperatives. *Journal of Science and Technology of Agriculture and Natural Resources*, 6 (2): 17–28.
- Amini A.M., Ramezani M. (2006a): Study of effective factors on success of poultry-farm cooperatives in Isfahan Province. *Journal of Science and Technology of Agriculture and Natural Resources*, 10 (1): 136–51.
- Amini A.M., Ramezani M. (2006b): Study of effective factors on success of poultry-farm cooperatives in Golestan & Mazandaran Province. *Journal of Agriculture Science and and Natural Resources*, 13 (2): 123–33.
- Amini A.M., Ramezani M., Ahmadi A. (2002): Studying the strength and weakness of training programs presented by Cooperative Administration of Isfahan Province. Unpublished Manuscript, Report of Research, Cooperative Administration of Isfahan Province.
- Australian Agricultural Center (AAC) (1988): Agricultural cooperatives in Australia. Working paper on agricultural cooperatives, SCA Technical Report Series, Canberra.
- Bhuyan S., (2000): Grower and manager issues in fruit and vegetable cooperatives. Paper presented at NCR-194 Annual Meeting, Las Vegas, Nevada.
- Carlo R., Weatherspoonb D., Petersonb C., Sabbatinia M. (2000): Affects of managers' power on capital structure: A study of Italian agricultural cooperatives. *International Food and Agribusiness Management Review*, 3: 27–39.
- Cochran W.G. (1976): Sampling techniques. NY, John Wiley & Sons.
- Darvishinia A. (2000): Evaluating the success of rural productive cooperatives in Mazandaran Province. Unpublished Manuscript, College of Agriculture, Tarbiat Modares University.
- Diakoulaki D., Mavrotas G., Papayannakis L. (1995): Determining objective weights in multiple criteria problems: the critic method. *Computer and Operation Research*, 22: 763–70.
- John L., Adrian Jr., Thomas W. (2001): Green agricultural cooperative managers and the business environment. *Journal of Agribusiness*, 19: 17–33.
- Jolliffe F.R. (1986): Survey design and analysis. New York, Haleson Press.
- Karami A., Rezaee Moghaddam K. (2000): Impacts of agricultural cooperatives on production process. *Agricultural Economics and Development Quarterly*, Special issue on productivity and efficiency. 13 (52): 1–33.
- Khamoushi H. (2003): The methods of evaluating managers. Training Center of State Management Press, Tehran.
- Safari Shali R. (2001): Studying the operation of poultry

- agricultural cooperatives in Tehran Province Unpublished Manuscript, College of Agriculture, Isfahan University of Technology.. Sarmad Z., Bazargan A., Hejazi A. (2000): Research methods in behavioral sciences. 3<sup>rd</sup> Edition, Agah Press.
- Sar Sakhti Erqui (1995): Social factors affecting the operation of fishing cooperatives in Boushehr Province. Unpublished Manuscript, Faculty of Social Science, Allameh Tabatabaie University.
- Shahbazi A. (2006): Rural development. Second edition, Tehran University.
- Shirani A. (1989): Management in cooperatives. Central Organization of Cooperatives Press.

*Received for publication on March 12, 2007*

*Accepted for publication on June 21, 2007*

---

*Corresponding author:*

**Amini A.M.**  
University of Technology  
Agricultural College  
Dept. of Rural Development Studies  
Isfahan, Iran  
aamini@cc.iut.ac.ir

