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Viewpoints of Experts of Agricultural Jihad Centers toward the Agricultural Extension: New Approach in Fars Province

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Abstract

Despite the numerous efforts have been done to develop and modernize the agricultural sector of Iran, this important sector has faced many serious challenges. The main role of agricultural extension in developing countries is to transfer new technologies created by research organizations of the public sector through proper methods such as exhibition, farm visits, meeting with farmers, using media, etc. Agricultural extension system is one of the most important means of diffusing agricultural advanced findings and also providing educational and advisory services which play a vital role in the development process, especially rural development. Agricultural extension in Iran doesn't have a favorable situation and hasn't been able to grow itself in terms of the approaches and extension methods, the formulation of aims and tasks, and organizing structure and organization. Therefore, it is essential that Iran's agricultural extension system, while addressing the challenges and failures, prepares itself for more effective management of future changes. This study was carried out in Fars province using survey research method. The stratified random sampling was used in the research. The statistical population of the research was 130 experts of the agricultural Jihad center of Fars. The findings showed that there is a difference between the performance of different activities in the pilot and non-pilot centers from the experts' point of view. The findings showed that attitude variables were the most effective in predicting the regression model. At last, some recommendations were presented due to the research results in order to improve the performance of service centers' activities.

Keywords: Agricultural Extension, Approach, Performance, Attitude, Fars.

Introduction

Despite the numerous efforts have been done to develop and modernize the agricultural sector of Iran, this important sector has faced many serious challenges. Nowadays, many countries have well understood the revival necessity of agricultural services to a more effective relationship with farmers and stakeholders in many different contexts such as appropriate transfer of new findings related to research and technology, agriculture, economy, poverty reduction, accessing smallholder farmers, coping with new problems of sustainability, environmental degradation, and climate change. The main role of agricultural extension in developing countries is to transfer new technologies created by research organizations of the public sector through proper methods such as exhibition, farm visits, meeting with farmers, using media, etc. (Feali, 2014). Although the extension experiences might be weak about innovation diffusion, public perception about the nature of development and promotion of agricultural technologies have been improved remarkably in the last two decades. Accordingly, new extension approaches should focus on three important components;

strategies for developing agricultural innovation systems, pluralism in service providers, and developing demand-oriented services (Fami ,2004).

Agricultural extension system is one of the most important means of diffusing agricultural advanced findings and also providing educational and advisory services which play a vital role in the development process, especially rural development. In this regard, Rivera and Solaiman (2009) describe it as an engine for transferring knowledge, innovation, and development. The purpose of the agricultural extension system is an informal education for farmers in order to improve agricultural practices so that providing new and efficient technologies for them to use in their farming activities. Agricultural extension system fulfilled the skills, information and technical needs of villagers through educational, technical and perceptional training, this system eventually creates the proper situation for the empowerment and promotion of life quality and also the efficient management of production resources (Feali et al., 2015). The issue of resource limitations and the purpose of addressing a large number of farmers have increased the attention to extension approaches. The fundamental philosophy of the current agricultural extension system is the linear model of technology development, in which there is a direct and linear relationship among research, education and extension, and producers.

Agricultural extension in Iran doesn't have a favorable situation and hasn't been able to grow itself in terms of the approaches and extension methods, the formulation of aims and tasks, and organizing structure and organization (Rezaei-Maghaddam and Asadollahpoor, 2018). Rivera (2001) believes that reforming the agricultural extension system to address its challenges will lead to food security, rising rural incomes, and rural poverty reduction. Therefore, it is essential that Iran's agricultural extension system, while addressing the challenges and failures, prepare itself for more effective management of future changes. Accordingly, the agricultural extension system must revise its strategies to respond to these new and changing needs (Feali et al., 2015). Choosing the appropriate approaches and methods depends on many factors including the social and economic situation of the region, the education level of target groups, the qualifications and professional skills of the staff, the performance facilities, the content of the extension messages, financial resources, etc. Therefore, the identification and examination of this system are essential and inevitable, in order to control the changes to reform the extension system. Based on this necessity, evaluating and studying the current situation of Iran's agricultural extension and depicting the necessary features of agricultural activities is required more than ever.

Rural services can be divided into many sectors such as financial resources (public, private or combination of both), service providers (agriculture organization, non-government organization or through participation), content (process, input, and output information) and method (facilities, counseling, research, and training). Agricultural services are part of rural services (Nederlof et al., 2010) and have five aspects including technical, economic, qualitative, individuals and researches (2000, Albert). The study of Golgiri and Maghsodi (2013) indicated that the effectiveness of Agricultural Jihad centers in Iran is determined by four variables: distance from the center to the nearest village, equipment and facilities of the center, staff of the center and the number of products in the region. They also concluded that there is a positive and significant relationship between these variables with the dependent variable of the effectiveness of the agricultural jihad centers. The results of Mokhtarihesari et al., (2011) showed that five factors of attitude, supervisory-supportive, transport infrastructure, time distribution of services, and extension education were the main obstacles in accessing to agricultural services. Agahi and Hashemi (2009) in analyzing farmers' attitude toward agricultural jihad centers of Kermanshah have found out that farmers' evaluation of these centers was at the moderate level and villagers had a positive attitude towards extension agents. The results of a research by Shiri et al., (2011) showed that there is a positive and significant relationship be-

tween the number of farmers covered by supervisors in the pivotal project of wheat with their effectiveness in increasing wheat production. The results also showed that there is a significant relationship between the technical support level of agricultural jihad organization to supervisors, with the supervisors' effectiveness in increasing production. The results also indicated that there is a negative and significant relationship between the satisfaction of the supervisors and the effectiveness of their performance in producing wheat. Qamar (2005) declared that the lack of awareness of managers and extension agents in reforming projects is the most important reason for the failure of these projects.

The extension new approach of Iran is formulated with the purpose of active participation of extension in agricultural production system and natural resources and rural development, on a wider level, was formulated to increase the technical, expertise and application knowledge of experts and their preparation to participate in the rural environment (Ansari and Rezaei-Moghaddam, 2018). Agricultural extension new approach and natural resources is based on the following principles: comprehensiveness and coherence in policy-making, planning and monitoring and plurality in implementation, using the pluralistic extension approach, responding and providing technical and professional needs of the producers, establishment of knowledge management in agriculture sector and natural resources in order to provide access to technical knowledge and research findings for stakeholders, participation, interaction, using administrative capacities and facilities in all levels (from the need determination of agricultural sector to the design and implementation of extension activities), assignment of the extension activities of each region to non-government sector, and giving responsibility of productive areas to the stationed experts of the area. The basic measures of the extension new are consisted of organizing and equipping rural agricultural jihad centers as a contact channel with producers, designing an area for experts to respond the needs of stakeholders and establishment of knowledge management in order to update the experts' knowledge. In this regard, it is necessary to use suitable extension approaches to improve technical and management skills of stakeholders and to change their beliefs and attitudes (Ansari and Rezaei-Moghaddam, 2018). Then, studying and evaluating the effectiveness and depicting the required features for designing and implementation of extension new approach are vital in Iran. This procedure should also be considered based on the new global conditions in terms of political borders and economic changes. Hence, doing a research that can depict the feature of this approach is very difficult and important, and it is necessary to pay more attention to the various dimensions of this project and also try to use different sources of information.

Methodology

This study was carried out in Fars province using survey research method. The stratified random sampling was used in the research. The centers that are working based on the extension new approach were selected as pilot, and the other centers were considered as non-pilot. The statistical population of the research was 130 experts of the agricultural Jihad center of Fars. Sixty individuals were selected in pilot service centers and 70 ones were selected in non-pilot service centers as the final samples for collecting the data through questionnaire. Based on literature review, a questionnaire was designed to conduct the primary study. The validity and reliability of the questionnaire were confirmed by a panel of professors and experts as well as conducting a pilot study with a sample of 30 individuals in Noorabad Mamasani city, respectively. Alpha values for variables such as awareness about the objectives of the extension new approach, the importance of activities in service centers, performance of the activities in service centers, job satisfaction, success of different dimensions of extension new approach, the level of access to educational supplies and attitude towards the

performance of the sample sites, were 0.83, 0.96, 0.81, 0.92, 0.94, and 0.89, respectively. Then, the required changes were made in the questionnaire.

The dependent variable of this research is the performance of the activities in agricultural jihad service centers. Independent variables of the research include individual variables (age, gender, degree of education), specialized variables (work experience, field of study, number of covered villages, and number of covered farmers), educational variables (number of courses taught in relation to extension new approach, the level of access to educational suppliers), and attitude variables (awareness about the objectives of extension new approach, job satisfaction, attitude towards the performance of the sample sites and the success of different dimensions of the extension new approach).

Definitions of variables

The success of the different dimensions of the extension new approach: it means that how the studied people see the success of the extension new approach based on the principles of this approach like zoning, organizing and support of agricultural jihad service centers, knowledge management, and providing the appropriate conditions for agriculture and sustainable development. The level of their beliefs is assessed with the Likert scale. Job satisfaction: the degree of satisfaction of the authorities from different aspects of their job, such as income, work hours and their job interest, this was also assessed with the Likert scale. Awareness about the objectives of the extension new approach: it means the knowledge and information of the stakeholders regarding the objectives of extension new approach such as their knowledge and awareness from the transformation of knowledge and new technologies, addressing the problems of the producers, awareness of the audience about the mutual interactions with the farmers based on Likert scale. Accessing to the required educational supplements: it means the required facilities and equipment for the expert for activity, which was measured by questions like the amount of access to facilities including cars, laptops, computers and etc. in Likert scale.

The evaluation of the performance of Agricultural Jihad centers using items like the importance of agricultural jihad centers' activities (public services, technical services, service activities, support services, educational-extension services) and also the success of the service centers' activities was assessed before and after the approach. Based on the findings of the previous researches regarding calculation and evaluation of the performance of agricultural extension staff, Karam and Rezaei-Moghaddam (2005) and Shirdel et al., (2014) calculated this index in the field of measuring the performance of agricultural production cooperatives as follow:

$$Y_i=\sum_{i=1}^{n} X_i Z_i$$

In which Y_i is the performance of production cooperatives, X_i is the number of required activities in different levels of cultivation, and Z_i is the amount of cooperative success in meeting the needs in different levels of cultivation. In the present study, according to the above formula, the performance components of the activities related to the extension new approach are as follows:

Y_i: performance of Agricultural Jihad service centers

X_i: the importance of activities in Agricultural Jihad service centers

Z_i: the success rate of the activities in Agricultural Jihad service centers

Results and discussion

The results of descriptive statistics related to the education level of experts in agricultural jihad service centers showed that 90 experts (69.2 %) have Bachelor degree, 37 experts (28.5%) have the master degree and 3 experts (2.3%) have Ph.D. degree. As it is indicated in Table 1, 58 experts (44.6%) were agronomists, and 35 (26.9%) of them also studied plant pathology. The important

point about this table is the shortage of extension experts in Agricultural Jihad service centers, which could be one of the weak points of the implementation extension new approach. More details are mentioned in the table.

Table 1. Frequency distribution of experts based on field study

Descipline of study	Frequency	Percent
Agronomy	58	44.6
Extension	5	3.8
Horticultural Science	9	6.9
Plant Protection Science	35	26.9
Plant Production	2	1.5
Agricultural management	4	3.1
Water **S**ciences **E**ngineering	3	2.3
Biosystem	3	2.3
Animal Science	2	1.5
Watershed Science	2	1.5
Agricultural Economics	2	1.5
Agricultural Meteorology	1	0.8
Soil Science	1	0.8
No answer	3	2.3
Total	130	100

In general, 76 experts (58.5%) are native and 53 experts (40.8%) are non-native. In other words, most of the experts are working in a region where they live. This fact would provide better response for farmers and their farms and also could help the experts to provide better service for their beneficiaries.

The comparison of agricultural Jihad service centers' performance in pilot and non-pilot service centers

The results of the t-test in Table 2 shows that there is a significant difference between the average performance of pilot and non-pilot service centers from the experts' point of view and the experts located in the region in the pilot service centers, assessed their activities' performance much more than the non-pilot ones (The average performance of the experts in the pilot service centers was 55.4 and this amount was 37.2 for the experts in non-pilot service centers).

Regarding the performance of public services (identifying and collecting the needs of beneficiaries, supplying the most important needs of the beneficiaries, collecting statistics and information of the beneficiaries, identifying the type of land-owning system, preventing the agricultural land use change, cooperation with the Islamic Council of the villages in the fields of production, technics, economy and society) the result of T-test also shows that there is a significant difference between the pilot and non-pilot service centers. In other words, according to the average performance of the public services in pilot centers (70.5) and non-pilot ones (46.5), it could be said that the experts of the pilot centers evaluated public services of these centers more effectively. It also indicates the focus of extension new approach on such activities. According to the results, it can be concluded that by implementing the extension new approach, more attention has been paid for public services, including identifying and collecting the needs of the beneficiaries, collecting the statistics and infor-

mation of the beneficiaries, identifying the land-owning system of the region and etc. consequently, this consideration could be more effective for future planning.

The results of T-test in table 2 show that from the expert's point of view, there is a significant difference between the performance of technical services in pilot and non-pilot centers, so that the performance of technical services in pilot service centers (46.4) is more effective than non-pilot centers (37.9). These activities include identifying and controlling pest and plant diseases, encouraging farmers to plant fodder plants, introducing new irrigation systems, and etc. Generally, this finding indicates that by implementing the extension new approach in Fars province, the technical services provided by the service centers have been increased.

Based on t-test results, there is a significant difference between the average performance of service activities in pilot and non-pilot service centers. Considering Table 2, it could be noted that the average performance of service activities from the experts' point of view is 51.6 in pilot service centers and this is 37.8 for non-pilot ones. Service activities of the centers include cooperation in providing different kinds of agricultural fertilizers for beneficiaries, cooperation in providing different kinds of chemical fertilizers, and also cooperation in providing modified seed for beneficiaries. The data resulted in a t-test (Table 2) show that there was a significant difference between the performance of support services in the pilot and non-pilot groups. The experts consider the support activities of pilot centers more effective than the non-pilot ones (the average performance of supportive activities between the experts of the pilot and non-pilot centers was 57.8 and 37.8, respectively). Supportive services of agricultural jihad centers include the participation of farmers in rural decisions and activities. Therefore, by implementing the extension new approach in pilot centers, the participation of farmers and beneficiaries in decision makings related to the villages has increased, and this helps the experts to reach the aims of the approach better.

Table 2. The performance comparison related to the activities of agricultural jihad service centers pilot and non-pilot service centers.

Variable	Pilot centers		Non-pilot services		t	sig
	mean	SD	mean	SD		
Performance of public services	70.5	20.6	46.5	17.3	7.1	0.0001
Performance of technical services	56.4	19.7	37.92	12.72	6.1	0.0001
Performance of service activities	51.6	18.6	37.8	13.4	4.7	0.0001
Performance of support services	57.8	26.3	37.8	16.5	4.3	0.0001
Performance of extension and educational service	60.2	19.5	39.4	13.3	6.9	0.0001
Total Performance	55.4	17.1	37.2	11.4	6.8	0.0001

Service performance (0-100)

As it is seen in Table 2, there is a significant difference between the average performance of extension and educational services (practical training of beneficiaries, making farmers familiar with new technologies, holding training classes, providing on-time extension advice about different levels of agricultural cultivation, creating effective communication among the experts and beneficiaries and etc.). Based on what the experts stated, the average performance of extension and educational

services is much higher in pilot centers (the average performance of extension and educational services in the pilot and non-pilot services was 60.2 and 37.2, respectively). According to Table 2, the extension and educational services have increased due to the implementation of extension new approach, which indicates the success of this approach.

The performance comparison of activities in pilot Agricultural Jihad service centers (before and after the approach)

The results of the T-test indicate that there is a significant difference between the average of activities in pilot service centers (Before and after the extension of new approach). In other words, from the experts' point of view, all the activities such as public activities (identifying and collecting the needs of the beneficiaries, collecting the data and statistics of the beneficiaries, identifying the landowning system of the region and etc.), technical services (encouraging farmers to cultivate forage crops, identifying and controlling the pests and plant diseases, increasing the productivity of rain-fed lands), service activities (cooperation and advice on providing various types of fertilizers, poison, and modified seeds and etc.), supportive services (participation of farmers in fundamental activities and rural decision-making, supporting the establishment of small-scale industries and other industries related to agriculture and etc.), extension and educational services (practical training of beneficiaries, cooperation in preparing agricultural TV shows and programs, the presence of farmers in agricultural exhibitions and festivals, the responsiveness of experts to farmers, the effective communication of farmers with beneficiaries, familiarization of farmers with government plans, facilitating relations between experts and farmers and etc.) were more effective than non-pilot service centers.

According to Table 3, there is a significant difference between the average performance public services before and after extension new approach. The average performance of public services by experts is higher in pilot services after the extension new approach (the average performance of public services before and after the extension new approach was 56.8 and 70.9, respectively). The t-test in Table 3 shows that there is a significant difference between the performance of technical services before and after the approach (at 0.002 level), in other words, the experts of pilot centers declared that the service center became more successful after implementing the approach. According to the information obtained from T-test in Table 3, it can be understood that there is a significant difference between the average performance of business services in pilot centers before and after the implementation of extension new system approach, and the average performance of service activities was higher in pilot service centers (51.6) after implementing the extension new system approach.

Table 3. The performance comparison of the activities in Agricultural Jihad service centers in pilot services (before and after the approach)

Variable	Before the approach		After the approach		Paired t-test	sig
	mean	SD	mean	SD		
Performance of public services	56.8	19.4	70.5	20.7	-4.5	0.0001
Performance of technical services	45.6	75.9	56.4	19.7	-3.2	0.002
Performance of service activities	46.0	16.2	51.6	18.6	-2.6	0.010
Performance of support services	48.6	23.2	57.8	32.4	-3.1	0.003

Variable	Before the approach		After the approach		Paired t-test	sig
	mean	SD	mean	SD		
Performance of extension and educational service	47.2	15.9	60.0	19.5	-4.2	0.0001
Total Performance	44.9	13.6	55.4	17.1	-3.8	0.0001

Service performance (0-100)

The results of t-test in Table 3 show that there is a significant difference (000.3) between the performance of supportive services in pilot centers, and the average performance of these services after the extension new system approach was higher (57.8) rather than before it (47.2). According to the information presented in Table 3, there is a significant difference between the average performance of extension and educational services before and after implementing the approach at the level of 0.00001. The amount of average performance of extension and educational services after the extension new system approach is higher (the average performance in pilot centers before and after the approach was 47.2 and 60, respectively).

Effective factors on the performance of agricultural jihad service centers

The hierarchical regression analysis was used to evaluate the effect of variables on the performance of service center activities. In each level, the effect of a series of factors predicted in the model was analyzed on the performance of service centers' activities and the results were evaluated. The results of this analysis presented in Table 4. The description of each step and the final model that includes the entrance of all factors are presented below.

Individual factors

The theoretical model of the research predicts that individual factors such as age (X_1), gender (X_2), level of education (X_3) and the type of experts' residence (X_4), have a key role in estimating the performance of service centers' activities. As it is stated in Table 4, four variables of individual structures have entered the model in the first step. The variation in R^2 shows that entering the individual factors increases the estimation ability of the model. In other words, 10.4 % of the changes in the performance of service centers' activities from the experts' point of view are predictable by four variables related to individual factors. The obtained statistical regression model is as follows:

$$\text{Total performance} = 1.8 + 1.1\ X_1 + 9.7 \times 10^1\ X_2 - 1.1 \times 10^2\ X_3 - 2.2 + 10^2\ X_4$$

Table 4. Results of hierarchical regression of model examination related to the factors affecting the performance of service centers' activities

Model	R	R Square	Adjusted R Square	R Square Change
1	0.194[a]	0.104	0.074	0.104
2	0.348[b]	0.121	0.060	0.017
3	0.363c	0.132	0.054	0.011
4	0.384[d]	0.468	0.339	0.336

a. Predictors: (Constant), X_1, X_2, X_3, X_4

b. Predictors: (Constant), X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8

c. Predictors: (Constant), X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}

d. Predictors: (Constant), X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}, X_{11}, X_{12}, X_{13}, X_{14}, X_1

e. Dependent Variable: performance

Specialized factors

According to the theoretical model, specialized factors (work experience (X_5), field of study (X_6), number of covered villages by the expert (X_7) and the numbers of covered farmers by the expert (X_8)) had influence on the performance of the service centers' activities from the experts' point of view. Therefore, the variables of this category have entered the model in the second step. The summary of the findings of the second step (Table 4) shows that entering the specialized variables will improve the ability of the model for 1.7% in predicting the performance of activities from the experts' point of view. This finding indicates the progress of the model's ability in this step. The obtained statistical regression model is as follows

Total performance= $1.8 \times 10^3 - 0.35\ X_1 + 9.6 \times 10^1\ X_2 - 1.1 \times 10^2\ X_3 - 2.4 \times 10^2\ X_4 - 4.84\ X_5 - 7.3\ X_6 - 1.2\ X_7 + 0.06\ X_8$

Educational factors

According to the theoretical model of the research, educational factors had a key role in the performance of activities in extension service centers. Educational factors have entered the model and analyzed with the variables such as the number of training courses related to extension new approach which passed by the experts (X_9) and the access to the required educational facilities (X_{10}). Findings of Table 4 show that educational factors improve the predicting performance of the model for 1.1 % from the experts' point of view. The obtained statistical regression model is as follows

Total performance=$1.6 \times 10^3 - 0.2\ X_1 + 1 \times 10^2\ X_2 - 1.1 \times 10^2\ X_3 - 2.3 \times 10^2 X_4 - 5.2X_5 + -10X_6 - 1.9X_7 + 0.063\ X_8 + 1.5X_9 + 3.8X_{10}$

Attitude factors

The theoretical model of the research suggests that attitude factors such as the success rate of various dimensions of extension new system approach (X_{11}), job satisfaction (X_{12}), attitude toward the performance of sample sites (X_{13}), and awareness about the aims of extension new approach (X_{14}) can be effective in the performance of service centers. In other words, if the experts have a better attitude toward the mentioned factors, these factors had a better role in performance improvement. Findings show that attitude factors could improve the ability of model prediction from the experts' point of view for 33.6%.

Total performance= $7.6 \times 10^3 - 1.9\ X_1 + 1.1 \times 10^2\ X_2 - 1.7 \times 10^2\ X_3 - 1.2 \times 10^2 X_4 - 1.2X_5 - 0.948\ X_6 - 4.9X_7 + 0.081X_8 + 3.7X_9 - 1.5X_{10} - 0.026\ X_{11} + 7.2X_{12} + 12.8\ X_{13} + 24.7\ X_{14}$

The final model of performance prediction's activities related to Agricultural Jihad service centers

The final model of predicting the performance of agricultural jihad centers was created by the hierarchical method at the fourth step of the regression analysis. This model includes all the variables which were assumed that are effective on the performance of service centers. This model is capable to explain the 46.8 % of the changes in the performance of service centers. According to the findings of the standardized coefficients β presented in Table 5, for one standard deviation of change in the value of education level, type of residence, attitude toward the performance of sample sites, awareness regarding the aims of extension new approach and the success rate of the various dimensions of extension new approach, the obtained changes were -0.23, -0.16, 0.37, 0.3 and 0.008. These five variables are among those variables in which the t values were significant at 5% level (Table 5).

Table 5. Regression coefficients of the final model of the factors affecting the performance of service centers' activities

Model	Standardized Coefficients	Std. Error	Unstandardized Coefficients	t	sig
	Beta		B		
(Constant)	-	370.906	763.105	2.057	0.042
X_1	-0.023	6.811	-1.973	0.290	0.773
X_2	0.143	65.576	110.624	1.687	0.094
X_3	-0.238	58.687	-177.263	3.021	0.003
X_4	-0.163	64.443	-127.614	1.980	0.050
X_5	-0.015	7.11	-1.294	0.182	0.856
X_6	-0.007	11.374	-0.948	0.083	0.934
X_7	-0.054	8.135	-4.993	-0.614	0.541
X_8	0.174	0.043	0.081	1.889	0.062
X_9	0.028	10.24	3.710	0.362	0.718
X_{10}	-0.042	2.929	-1.525	-0.521	0.604
X_{11}	0.008	44.310	-0.260	-0.083	0.040
X_{12}	0.160	5/518	7.29	1.321	0.189
X_{13}	0.370	3.218	12.852	3.994	0.000
X_{14}	0.307	7.187	24.739	3.442	0.001

R^2= 0.468 F= 5.63 Sig= 0.0001
Dependent variable: performance

Conclusion and recommendations

The findings showed that there is a difference between the performance of different activities in the pilot and non-pilot centers from the experts' point of view. In this regard, the following recommendations have suggested to improve the performance of service centers' activities:

As findings showed that the performance of public activities of agricultural jihad centers was higher than the other activities for improving the performance of public services, it is suggested that extension experts should not be involved in non-extension services and should be more focused on their area-related works. Regarding the performance of technical activities, the results also indicated the difference in the performance of these services in pilot and non-pilot centers. Experts from pilot centers have evaluated the performance of these activities better. Therefore, it is recommended that essential programs should be provide for training of the experts in the area. The findings also showed that there is a difference between the two groups in relation to service activities. In order to improve the activities, it is recommended to lead the farming to the low water conditions by promoting of the drought-resistant seeds. It is also suggested to be in touch with productive cooperation, agricultural consulting firms, veterinary and plant pathology clinics. Results related to the performance of supportive activities showed that experts of pilot centers evaluated the performance of these centers much better. In this regard, it is suggested that the experts of the regions, be introduced to the councils of villages to improve the participation of rural people. After public services, educational services had the highest performance and it definitely states the success of extension new approach in such services. In this regard, in order to improve extension and educational activities, it is recommended to use specialists in service centers. Also, in order to enhance the performance of extension and education activities, it is essential to design these activities based on educational needs to motivate the beneficiaries to participate. Equipping Agricultural Jihad service centers with differ-

ent educational supplements would be an effective incentive to increase the performance of extension and education activities. It is recommended that training classes be conducted in line with the increment of experts' information and knowledge.

The results related to the study of individual variables in predicting the performance of service centers activities from experts' point of view showed that entering these variables into the model will improve the prediction ability of the model. The second and the third group of the variables which include specialized and educational variables, don't have a significant contribution in predicting the model. The fourth group is the experts' attitude toward the performance of the extension service centers activities. This group had the most effective in predicting the regression model. In this category of variables by increasing variables including the attitude toward the dimensions of satisfaction related to the extension new approach, job satisfaction, attitude toward the performance of sample sites and awareness regarding the aims of extension new approach, the performance of the service centers activities gets higher. Findings indicate that experts don't have satisfaction regarding the incentive policies of the approach and they largely mentioned about the success of the zoning in the approach and they were not satisfied with the performance of the service centers activities in organizing and the support of service centers and also they complained about the shortage of facilities. Therefore, in order to increase experts' satisfaction about the approach, it is recommended to increase their salaries and freedom in practicing in the region, and of course, it is also suggested to promote their scientific, social and organization situation in the service centers to make them more motivated. It is also suggested to determine a specific budget for centers at the national level, and facilities should be provided to centers and experts to better implement the extension new approach. Findings indicated that the educational background of the most of experts goes back to the other fields of agriculture so that the role of extension experts was diminished. This is one of the most important weaknesses of the approach because the potential and capacities of the extension were not appropriately used. Therefore, it is recommended to use more extension experts so that other experts and farmers use their capacities and capabilities.

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