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Adaptive Analysis of Production Cooperatives with the Functions of Agricultural Innovation Management System: A Case Study of Khuzestan Province

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Abstract

The purpose of this research is to analyze the production cooperatives in adaptive with the agricultural innovation management system through qualitative method. To achieve the objectives of the research, semi-structured interview method and brainstorming technique were used in data collection and triangulation method was used to evaluate the validity of qualitative findings. In order to implement the qualitative method, three types of open, axial and selective coding were used. MAXqda12 software was used to analyze the collected data. The study population of this research included 30 experts from the agricultural production cooperative sector at the level of Khuzestan province, who were working in the field of agricultural production cooperatives with agricultural orientation. Based on the qualitative analysis, 11 functions and 36 sub-functions were identified for managing innovation in agricultural cooperatives in Khuzestan province, and for the adaptation of production cooperatives to the agricultural innovation management system, 124 summaries with 767 repetitions with 59 sub-categories in 4 main categories were identified. Strength, weakness, threats and opportunities were identified. Using the obtained results for planners will pave the way for production cooperatives to adapt to the agricultural innovation management system.

Keywords: Qualitative Research, Production Cooperatives, Agricultural Innovation Management System

1. Introduction

The development of innovation in agricultural and rural cooperatives with an emphasis on fostering entrepreneurial behavioral characteristics can be considered as a solution to overcome the problems of development in cooperatives (Al Boyeh et al., 2017). Since the most important type of agricultural cooperatives in Iran is the production cooperative; Therefore, for the promotion and sustainability of this sector, there is a need for management with knowledge, skills and innovation (Sadat Mousavi and Farajollah, 2012). Due to the increasing importance of innovation in the national economy and the profound effects that the processes of globalization and the complex environment of global interactions have imposed on countries in the field of competitiveness, the functions and structure of the national innovation system have become very important. The agricultural innovation management system is a more developed form of agricultural knowledge and information system that is not only limited to research, promotion and education, but also all actors in the value chain of agricultural products that directly affect agricultural decision-making and their innovations. has covered. In this system, specific roles are defined for each of these actors and with a network approach, a context is created for synergy and existing agricultural innovations (Soltani et al., 2013). Based on various researches conducted in Iran, agricultural and rural cooperatives are facing various problems in the field of innovation management. Lack of training courses in the field of innovation, lack of attention of cooperative managers towards innovation and creativity (Rahimi and Ebrahimi, 2013), lack of familiarity of managers with management scholars, insufficient and unrelated education of managers, insufficient understanding of the importance of innovation and Innovation resources and lack of access to research and development resources in the field of innovation (Sadat Mousavi and Farajollah, 2012), are among these cases. Also, the lack of a suitable

organizational structure for using organizational innovation models in the country's agricultural cooperatives is one of the important issues in the field of innovation management (Rahbari et al., 2017). In their research, Noorollah Noori Vandi et al., (2011) concluded that members' limited knowledge of the principles and philosophy and the formation of agricultural production cooperatives, weak training of managers, lack of attention to creativity and innovation, and weak information about the most important problems of cooperatives. Agriculture is the province of Khuzestan. Also, regarding the evaluation of innovation management functions in livestock processing and packaging cooperatives in Khuzestan province, Ommani and Salmanzadeh (2013) concluded that the status of innovation management functions such as designing and organizing innovation, financing and creating infrastructure, research and Development and creation of knowledge, development of innovative human resources, transfer and dissemination of innovation, commercialization and exploitation of innovation have not been at the desired level. Kharrat and Bakhshandeh (2016) also concluded that the ability of creativity and innovation on the competitiveness of cooperative companies in Ahvaz is not at the optimal level. Also, based on the research results of Alizadehnia et al., (2022) in the field of innovation management in agricultural production cooperatives of Khuzestan province and adaptive of cooperatives with agricultural innovation management indicators, there are many problems such as weak attitude towards innovation and creativity, lack of cultural infrastructure and Materially in the field of innovation, there is low technical knowledge of managers in the field of innovation and low productivity of agricultural production cooperatives.

Considering the problems expressed in the agricultural cooperative sector of Khuzestan province, it is necessary to think about innovation management in this sector. This research, which was carried out with the aim of qualitative analysis of the situation of production cooperatives in adaptive with the agricultural innovation management system, will play a great role in the literature and the field of practice in the field of development of innovation management in agricultural cooperatives.

2. Materials and Methods

This research is practical in nature. Since the way of controlling the variables is non-experimental. In this research, the qualitative paradigm has been used in an exploratory way (Božič, Siebert and Martin, 2020). In terms of the possibility of using the findings, the present study is a decision-oriented study. Based on the division of types of research based on the purpose, it is considered as applied research. In the classification of research according to the method of data collection, it is considered a descriptive research because it qualitatively describes the state of production cooperatives in adaptive with the agricultural innovation management system.

The study sample of this research includes 30 experts from the agricultural production cooperative sector at the level of Khuzestan province. To achieve the objectives of the research in the qualitative part, the semi-structured interview method and brainstorming technique and observation have been used in data collection. To evaluate the validity of qualitative findings, triangulation method was used in the way of forming a research team and different methods of data collection and member control technique. In order to implement the qualitative method, three types of coding, open, axial and selective, were used.

In order to identify the functions of innovation management in agricultural cooperatives of Khuzestan province, qualitative methods of content analysis, interviews with experts and brainstorming method were used. In the first step, 25 functions and 112 sub-indices were identified by using the method of research and research records and content analysis, and then 11 functions and 35 sub-indices were extracted from them through interviews with experts and brainstorming method.

In order to qualitatively analyze the status of production cooperatives in adaptive with agricultural innovation management, the status of innovation management functions in agricultural cooperatives of Khuzestan province were investigated. For this purpose, 30 experts in the field of agricultural cooperatives in the province were examined. Based on the qualitative study conducted in the form of 3 stages of open coding, axial coding and selective coding using MAXqda12 software. First, the semantic units obtained from the methods of interviews, focused meetings, and brainstorming were entered into the software after writing edits, and then the aforementioned three types of coding were implemented. It should be noted that no presumption regarding the separation of brief descriptions was taken into account during data collection and the respondents were asked to freely explain the status of production cooperatives in accordance with the agricultural innovation management system. and express their expressions. After providing brief descriptions by the respondents, sub-categories and then categories were explained through coding to express the status of agricultural production cooperatives in accordance with the agricultural innovation management system in Khuzestan province.

3. Results and Discussion

3.1 Personal Characteristics

The results of table (1) show that the lowest frequency of 2 people, 6.67% were aged 61 to 71 years. Also, the most frequent number of 14 people with 46.6% were 41 to 50 years old. The average age of agricultural production cooperative experts was 44.5 years. The results of Table (1) in the qualitative phase show that the lowest frequency of 11 people, with 36.67 percent, had a master's degree. Also, the highest number of 19 people with 63.33% have bachelor's degrees. Also, the lowest frequency of 12 people, with 40% of them being female, and the highest frequency of 18 people with 60% of them being male.

3.2 Functions of Innovation Management in Agricultural Cooperatives

In order to identify the functions of innovation management in agricultural cooperatives of Khuzestan province, qualitative methods of content analysis, interviews with experts, brainstorming and focus group methods were used. In the first step, 25 functions and 112 sub-functions were identified by using the method of reviewing sources and research records and content analysis, and then 11 functions and 35 sub-functions were extracted from them through interviews with experts and the brainstorming method. They had a consensus. This function and sub-functions and the percentage of experts' agreement as functions of innovation management in agricultural cooperatives of Khuzestan province are presented in Table 2.

Table 1. Frequency distribution of age groups of members, level of education and gender of experts of agricultural production cooperatives

variable	Level	Frequency	Percentage	Mean/Mod
Age	31-40	10	33.33	44.57
	41-50	14	46.6	
	51-60	4	13.33	
	61-70	2	6.67	
Education	BSc	19	63.33	BSc
	MSc	11	36.67	
Gender	Male	18	60	Male
	Female	11	40	

Table 2. Functions and sub-functions of innovation management in agricultural cooperatives of Khuzestan province

Functions and sub-functions of innovation management	PA*
The first function: Inventing and creating innovation	
Infrastructure and material and spiritual requirements for creating innovation	85
Studies predicting acceptance of new ideas and methods	95
Attention to empowerment and professional development to create innovation	85
The second function: Organizing innovation	
Paying attention to the manner, time, place, extent of application of innovation	85
Programs and policies to support and encourage innovation in the agricultural sector	95
The existence of organizational knowledge and skills	85
The third function: Innovation planning	
Analysis and evaluation of previous production methods	80
Using new production methods	90
Analysis and evaluation of previous production technologies	90
Use of new production technologies	75
Developing effective production plans based on new methods and technologies	75
The fourth function: Financing and creating infrastructure to facilitate innovation	
Budget and financial support for research in agricultural cooperatives	70
Research and innovation facilities, equipment and infrastructure in agricultural cooperative	70
Financial support for innovative people in agricultural cooperatives	85
The fifth function: Attention to innovation application strategies	
Determining weaknesses, strengths, threats and opportunities in turning ideas to innovation	90
Analysis and evaluation of competitive strategies	85
Paying attention to the strategies of turning ideas into innovations	75
The sixth function: Research and development in the field of innovation	
Attention to need-based agricultural research in cooperatives	90
Attention to joint research with research centers	85

Functions and sub-functions of innovation management	PA*
Attention to joint research with higher education centers	90
Seventh function: Development of innovative human resources	
The existence of professional development and employee empowerment programs	75
Attracting experts with experience and knowledge of innovation and creativity	80
The existence of incentive programs for the development of innovative human resources	70
The eighth function: Diffusion of innovation	
Attention to cooperatives' visits to research centers and innovative companies	85
Dissemination of new research from research centers to cooperatives	90
Cooperatives' awareness of research and innovation in research centers	75
Ninth function: Organizational transformations in line with innovation	
Paying attention to innovation indicators in the structure of recruiting human resources	80
Attention to innovation indicators in empowerment programs	70
Attention to innovative criteria in organizational improvement	70
The tenth function: application of innovation	
Application of new technologies by members	75
The amount of knowledge and motivation to use new technologies by members	80
11th function: Marketing of new products	
Knowing new markets	70
Attention to new marketing methods	85
Knowledge of pricing policies	90
Analysis and evaluation of consumers and market knowledge	75

*Percentage of agreement

3.3 Adaptive of Agricultural Production Cooperatives with The Functions of Agricultural Innovation Management System

In order to qualitatively analyze the situation of production cooperatives in accordance with the agricultural innovation management system, summaries were collected through open coding. It should be noted that no presumption regarding the separation of brief descriptions was taken into account during data collection and the respondents were asked to freely explain the status of production cooperatives in accordance with the agricultural innovation management system. and express their expressions. After providing brief descriptions by the respondents in the number of 124 cases with 767 repetitions, through coding to explain the subcategories in the number of 59 cases and then the categories in the number of 4 cases to express the status of agricultural production cooperatives in accordance with the agricultural innovation management system in Khuzestan province was paid. Categories including strengths, weaknesses, opportunities and threats were considered.

3-1 Coding of first group of sub-categories for the adaptation of agricultural production cooperatives to the agricultural innovation management system:

Based on the qualitative study conducted in the form of brainstorming methods, focus group meetings and face-to-face interviews, all 124 brief descriptions were examined and the first group of sub-categories that were the result of coding and among the brief descriptions It was extracted by the researchers for the adaptation of agricultural production cooperatives to the agricultural innovation management system in Khuzestan province and it was placed in the first category, that is, strengths. The items mentioned in table 3 were identified in 11 sub-categories in the form of 21 brief descriptions and with 119 repetitions with different items.

3-2 Coding of the second group of subcategories for the adaptation of agricultural production cooperatives to the agricultural innovation management system:

Based on the qualitative study conducted in the form of brainstorming methods, focus group meetings and face-to-face interviews, the remaining 103 summaries were examined and the most important weak points as the second category of sub-categories that were the result of the coding and from Among the summaries were extracted by the researchers for the adaptation of agricultural production cooperatives to the management system of agricultural innovation in Khuzestan province and it was expressed in table 4 in 21 sub-categories in the form of 51 summaries and with 296 repetitions with different items.

3-3 Coding of the third group of subcategories for the adaptation of agricultural production cooperatives to the agricultural innovation management system:

Based on the qualitative study conducted in the form of brainstorming methods, focus group meetings and face-to-face interviews, the most important opportunities as the third category of sub-categories for the adaptation of

agricultural production cooperatives to the agricultural innovation management system in Khuzestan province, in table 5 was expressed in 13 sub-categories in the form of 26 brief descriptions and with 166 repetitions with different items.

3-4 Coding of the fourth group of subcategories for the adaptation of agricultural production cooperatives to the agricultural innovation management system:

Based on the qualitative study conducted in the form of brainstorming methods, focus group meetings and face-to-face interviews, the most important threat points as the fourth category under the categories, for the adaptation of agricultural production cooperatives to the agricultural innovation management system in Khuzestan province in Table 6. 14 sub-categories were expressed in the form of 26 brief descriptions and with 186 repetitions with different items.

Table 3. Strengths for adaptation of agricultural production cooperatives to agricultural innovation management system in Khuzestan province

Functions of Innovation System	Categories	Subcategories	Repetition
Inventing and creating innovation	Strengths 1	Benefiting cooperatives from young and creative human resources and desirable and available agricultural resources in the field of creating innovation	16
Organization of innovation	Strengths 2	The existence of experts and a suitable organizational platform for organizing innovation	10
Innovation planning	Strengths 3	The existence of a technical and human platform to analyze and evaluate the effectiveness of current methods	22
		The existence of a technical and human platform to provide new production methods	
Financing and creating infrastructure to facilitate innovation	Strengths 4	Members' willingness to invest in innovation	5
Development of innovative human resources	Strengths 5	The existence of young and creative forces ready for training and education in the field of creativity and innovation and setting up knowledge-based companies in the field of agricultural cooperatives	19
		Existence of appropriate legal conditions to attract innovative human resources	
Diffusion of innovation	Strengths 6	Favorable conditions of the family structure of some cooperatives and the willingness of technical and social leaders to support the diffusion of innovation	12
Organizational changes in line with innovation	Strengths 7	Occurrence of changes in mental models and group learning in the field of innovation in some agricultural cooperatives	10
Application of innovation	Strengths 8	The presence of leading farmers and talented young people and experienced farmers with valuable local knowledge and the foundation for the application of innovation and new knowledge.	11
Product marketing	Strengths 9	The existence of cooperative networks and holding training courses in the field of new marketing	14

Table 4. Weaknesses for the adaptation of agricultural production cooperatives to the agricultural innovation management system in Khuzestan province.

Functions of Innovation System	Categories	Subcategories	Repetition
Inventing and creating innovation	Weakness 1	Lack of infrastructure and material and spiritual requirements to create innovation	29
		Not paying attention to empowering members to develop creativity and create innovation	23
Organization of innovation	Weakness 2	Lack of support, encouragement and professional development programs and policies regarding the use of innovation	17
		Lack of necessary knowledge and skills in the field of how to use innovation	10

Functions of Innovation System	Categories	Subcategories	Repetition
Innovation planning	Weakness 3	Lack of analysis and evaluation of current production technology and methods	11
		Failure to develop a plan and use new technology and production methods	11
Financing and creating infrastructure to facilitate innovation	Weakness 4	Lack of financial support for the implementation of research and innovative activities	18
		Lack of necessary funds to facilitate innovation	11
Attention to innovation application strategies	Weakness 5	Absence of strategic studies in the application of innovation in cooperatives	11
Research and development in the field of innovation	Weakness 6	Inattention of the company's elements to research and development in the field of innovation	11
		Lack of motivation for research and development in the field of innovation	10
Development of innovative human resources	Weakness 7	Lack of sufficient funds for the development of innovative human resources	11
		Lack of motivational and cognitive program for the development of innovative human resources	11
Diffusion of innovation	Weakness 8	Weak communication between cooperatives, research centers and innovative companies	17
		Low use of local elites and leaders in innovation diffusion	5
Organizational changes in line with innovation	Weakness 9	Structural weakness of manpower	20
		Weakness of organizational structure in creating, planning and spreading innovation	18
Application of innovation	Weakness 10	Low level of necessary knowledge in the field of innovation application	5
		Low motivation in the field of innovation application	5
Product marketing	Weakness 11	Lack of needs assessment and cognitive weakness in the field of new marketing methods and new products in the market	22
		Structural weakness in the field of modern marketing and the prevalence of traditional brokerage-based marketing system	20

Table 5. Opportunities for the adaptation of agricultural production cooperatives to the agricultural innovation management system

Functions of Innovation System	Categories	Subcategories	Repetition
Inventing and creating innovation	Opportunity 1	The presence of young and creative forces to invent and create innovation, and the rural community requires the use of innovations that improve the economic status of farmers.	11
		The development of technological advances and the expansion of virtual social networks	15
Organization of innovation	Opportunity 2	Taking advantage of the capabilities of knowledge-based companies located in science and technology parks in the field of innovation organization	10
Innovation planning	Opportunity 3	The existence of numerous research and higher education centers in the province to formulate effective production plans based on new methods and technologies.	11
Financing and creating infrastructure	Opportunity 4	Cooperatives benefit from the support of science and technology parks to create infrastructures to facilitate innovation	13

Functions of Innovation System	Categories	Subcategories	Repetition
Attention to innovation application strategies	Opportunity 5	The existence of several strategic support plans to transform ideas with commercialization capabilities into commercial phenomena	14
Research and development in the field of innovation	Opportunity 6	The presence of higher education centers, research centers and numerous growth centers in the field of agriculture in the province to conduct new research in the agricultural sector	12
Development of innovative human resources	Opportunity 7	Taking advantage of the incubator of technology units in rural areas	15
Diffusion of innovation	Opportunity 8	The possibility of using interested local leaders and the practices of the agricultural extension department in rural areas to spread innovation	18
Organizational changes in line with innovation	Opportunity 9	Paying attention to the establishment of innovation centers and cooperation development and technology and innovation ecosystems in the cooperative sector in recent years at the level of the Ministry of Cooperation	12
Application of innovation	Opportunity 10	The existence of multiple fields of production and product processing in the cooperative sector for the application of innovation	14
Product marketing	Opportunity 11	The possibility of using new ways of marketing agricultural products and using virtual space and e-commerce	12
		The possibility of entering many markets in neighboring countries to supply agricultural products and produce special and marketable products	13

Table 6. Threats to the adaptive of agricultural production cooperatives with the agricultural innovation management system in the province

Functions of Innovation System	Categories	Subcategories	Repetition
Inventing and creating innovation	Threat 1	Lack of material and spiritual support for inventing and creating innovation	14
		Lack of favorable attitude in the society towards the glory of agricultural cooperatives in creating innovation	11
Organization of innovation	Threat 2	Lack of material and spiritual support for the organization of innovation in cooperatives by the government	18
Innovation planning	Threat 3	Lack of interaction and coordination with research and higher education centers to develop effective production plans	16
		The existence of economic crises and the government's lack of attention for financial support in developing effective production plans based on new methods and technologies	18
Financing and creating infrastructure	Threat 4	Lack of financial support from government, research and knowledge-based centers for research activities and innovative people	19
Attention to innovation application strategies	Threat 5	Non-investment of the public and private sector in the application of strategies to transform ideas into innovation	17
Research and development in the field of innovation	Threat 6	Neglect of educational and research centers to conduct joint research with cooperatives	12

Functions of Innovation System	Categories	Subcategories	Repetition
Development of innovative human resources	Threat 7	Inadequate view of the rural community to the cooperatives' responsibilities and programs in the field of human resources development	15
Diffusion of innovation	Threat 8	Greater ability of cooperatives' competitors (private companies and research centers) in spreading innovation	16
Organizational changes in line with innovation	Threat 9	The rural community's inappropriate view of cooperatives in the field of innovation due to the lack of innovative empowerment programs in the organizational structure and lack of trustees and expert experts in the field of innovation	18
Application of innovation	Threat 10	Competitors' investment in the application of new technologies in the agricultural sector and the reduction of villagers' trust in cooperatives in the field of application of innovation	14
Product marketing	Threat 11	The presence of brokers and their greater knowledge of the market than cooperatives	16
		The existence of a traditional market with many price fluctuations in inputs and production products	15

4. Conclusion and Recommendation

In this research, the functions of innovation management in agricultural cooperatives of Khuzestan province were identified, and then the status of these cooperatives was qualitatively examined in terms of strengths, weaknesses, opportunities, and threats to adapt to the functions of the agricultural innovation management system. According to the research literature and research background in the target area, this research has high originality, because so far no research has been done regarding the adaptation of agricultural production cooperatives to the functions of the innovation management system. Paying attention to the results of this research will lay the foundation for the expansion of the adaptation of agricultural production cooperatives to the functions of the agricultural innovation management system. A very important point in this research is that the intended functions have been identified based on the opinion of experts and according to the conditions of the region, and the adaptation of cooperatives to these functions will create favorable conditions. The results of this research will contribute significantly to the increase of research literature in the field of adaptation of agricultural production cooperatives to the functions of the innovation management system in agriculture. In this section, based on the goal outlined in the research, results have been expressed in line with the implementation of the relevant goal. In the following discussion, the results obtained are compared with the results of internal and external research.

After determining the functions of the agricultural innovation management system in the study area, the status of agricultural production cooperatives was investigated in accordance with these functions. In the first step, the weaknesses in this adaptation were analyzed and compared with similar researches. Based on the results of the lack of infrastructure and material and spiritual requirements to create innovation, lack of attention to empowering members to develop creativity and create innovation, lack of support, encouragement and professional development programs and policies regarding the application of innovation and lack of necessary knowledge and skills in the field. The way of using innovation, which is approved by Rahimi and Ebrahimi (2013), has been one of the weak points. Also, lack of analysis and evaluation of current technology and production methods, lack of planning and use of new technology and production methods, lack of financial support for the implementation of research and innovative activities, lack of necessary credits to facilitate innovation and lack of strategic studies in the application of innovation in cooperatives. It is another weak point, which was emphasized in the researches of other researchers such as Varamini et al. (2019). In the following, it was found that the company's lack of attention to research and development in the field of innovation, the lack of motivation for research and development in the field of innovation, the lack of sufficient funds for the development of innovative human resources, the lack of a motivational and cognitive program for the development of innovative human resources, Weakness of communication between cooperatives, research centers and innovative companies, low use of local elites and leaders in the dissemination of innovation, structural weakness of human resources, weakness of organizational structure in creation, planning and dissemination of innovation, low level of necessary knowledge in the field of innovation application, low Necessary motivation in the field of application of innovation, lack of needs assessment and cognitive weakness in the field of new marketing methods and new products in the market, structural weakness in the field of new marketing and the prevalence of the traditional marketing system based on brokers are among the weaknesses of agricultural production cooperatives in

order to adapt to the innovation management system model. They were farmers, which are confirmed by the research of other researchers such as (Sadat Mousavi and Farajollah, 2012).

In the second step, the strengths in this adaptation were analyzed and compared with similar researches. Based on the results of cooperatives benefiting from young and creative human resources and favorable and available agricultural resources in the field of creating innovation, the existence of experts and a suitable organizational platform for organizing innovation, the existence of a technical and human platform for analyzing and evaluating the effectiveness of current methods, the existence of young forces and creative and ready to be trained and educated in the field of creativity and innovation and setting up knowledge-based companies in the field of agricultural cooperatives is one of the strengths of agricultural production cooperatives to adapt to the agricultural innovation management system model, which was confirmed in the research of other researchers such as Askari and Mohammadzadeh (2018). is placed Also, the existence of appropriate legal conditions to attract innovative and creative human resources in agricultural production cooperatives, the favorable conditions of the family structure of some cooperatives and the desire of technical and social leaders to support the spread of innovation, changes in mental models and group learning in the field of innovation in some Agricultural cooperatives, the presence of leading farmers and talented young people and experienced farmers with valuable local knowledge and the foundation for the application of innovation and new knowledge, the existence of cooperative networks and the holding of training courses in the field of entering new marketing are among the strengths of agricultural production cooperatives in order to adapt to the system model. Agricultural innovation management. This research finding is consistent with the findings of Sharifzadeh et al. (2014).

In the third step, the opportunities in this adaptation were analyzed and compared with similar researches. Based on the results of the existence of young and creative forces to invent and create innovation and the rural society seeks to use innovations that improve the economic status of farmers, develop technological advances and expand virtual social networks, take advantage of the capabilities of knowledge-based companies located in science and technology parks in the field The organization of innovation, the existence of numerous research and higher education centers in the province to develop effective production programs based on new methods and technologies, the use of cooperatives from the support of science and technology parks to create infrastructures to facilitate innovation, the existence of numerous strategic support plans to transform ideas with commercialization capabilities into Commercial phenomena and its application and the possibility of creating centers for the growth of technology units in the agricultural cooperative sector of the province have been among the opportunities for agricultural production cooperatives to adapt to the model of the agricultural innovation management system, which has been confirmed in the research of other researchers such as Maghabl et al., (2016). Existence of higher education centers, research centers and numerous growth centers in the field of agriculture in the province to carry out new research in the agricultural sector, use the growth centers of technological units in rural areas, use the experiences of entrepreneurs and graduates to empower creative people to present ideas and become innovations , the possibility of taking advantage of interested local leaders and the experiences of the agricultural extension department in rural areas to spread innovation, paying attention to the creation of innovation and cooperative development centers and the technology and innovation ecosystem in the cooperative sector in recent years at the level of the Ministry of Cooperatives, from the opportunities of agricultural production cooperatives to Adaptive with the model of agricultural innovation management system has been confirmed in the researches of other researchers such as (Sadat Mousavi and Farajollah, 2012). The existence of many areas of production and processing of products in the cooperative sector for the application of innovation, the possibility of using new methods of marketing agricultural products and the use of virtual space and e-commerce, the possibility of entering many markets in neighboring countries for the supply of agricultural products and the production of special and marketable products from The opportunities of agricultural production cooperatives were to adapt to the agricultural innovation management system model.

In the fourth step, the threats in this adaptation were analyzed and compared with similar researches. Based on the results, the lack of material and spiritual support for inventing and creating innovation by banks and government organizations, the lack of a favorable attitude in the society towards the contribution of agricultural cooperatives in creating innovation, the lack of material and spiritual support for the organization of innovation in cooperatives by the government, lack of interaction and coordinating with research and higher education centers to develop effective production programs based on new methods and technologies, the existence of economic crises and the lack of government attention for financial support in developing effective production programs based on new methods and technologies, the lack of financial support from government, research and knowledge-based centers from research activities and innovative people in cooperatives, lack of investment by the public and private sector in the application of strategies to transform ideas into innovation in the cooperative sector, lack of attention of educational and research centers to conduct joint research with cooperatives, inappropriate view of the rural community to the activities and programs of cooperatives in The field of human resources development, the greater ability of the competitors of cooperatives (private companies and research centers) in spreading innovation in the society and the people trusting

them more than the cooperatives, the inappropriate view of the rural community towards the cooperatives in the field of innovation due to the lack of innovative empowerment programs in the organizational structure and not having Trustees and expert experts in the field of innovation, competitors' investment in the application of new technologies in the agricultural sector and the reduction of villagers' trust in cooperatives in the field of innovation, the existence of brokers and their greater knowledge of the market than cooperatives, the existence of a traditional market with large price fluctuations in inputs and Produced products were one of the threats of agricultural production cooperatives to comply with the agricultural innovation management system model. The researches conducted by Askari and Mohammadzadeh (2018), Shahmirzadi et al. (2018) and Varamini et al. (2019) agree with the findings of this research.

Recommendation:

Considering the identification of the functions of innovation management in agricultural cooperatives of Khuzestan province and the analysis of the situation of these cooperatives in terms of strengths, weaknesses, opportunities and threats for adaptive with the functions of the agricultural innovation management system, the results of this research provide the necessary platform for expanding the adaptive of production cooperatives. Agriculture will be agricultural innovation management system functions. According to the results, it is suggested to provide the necessary facilities and equipment for the development of creativity and creation of innovation in agricultural cooperatives, planning and implementation of motivational, support and encouragement programs in the field of creation, development, dissemination and application of innovation, self-reliance for the implementation of educational and motivational programs. In the field of creation, development, dissemination and application of innovation, the optimal use of local elites and leaders in the dissemination of innovation, creating the necessary motivation and utilizing young and creative forces in rural areas to invent and create innovation, holding educational and promotional courses in the field of innovation and Creation and application of innovation, using the capabilities of agricultural research and higher education centers in the province to evaluate the efficiency of technology and current production methods and the use of new methods, using the capabilities of knowledge-based companies in the field of organizing innovation in the cooperative sector at the province level, using research centers and higher education in the province to formulate effective production plans in line with innovation, the necessary use of the support of the provincial science and technology park to create infrastructures to facilitate innovation in agricultural cooperatives, the requirement to establish agricultural technology units of the provincial science and technology park and offices from research centers in cooperatives agriculture, entering many markets in neighboring countries by establishing interaction with other related organizations at the provincial level, developing innovation centers and technology ecosystem and innovation in the cooperative sector to develop creativity and creating innovation, using multiple strategic support plans to transform ideas into phenomena Innovation in the cooperative sector at the national and regional levels and the development of innovation centers and technology ecosystem and innovation in the cooperative sector in order to apply innovation and create facilities for structural reforms and institutionalization of innovative marketing in cooperatives at the national and regional levels should be considered so that the necessary context To provide for the adaptation of production cooperatives with the functions of the agricultural innovation management system.

References:

1. Al Boyeh, S., Rezaei Moghadam, K. and Baradaran, M. (2017). Creating innovation in rural cooperatives with an emphasis on entrepreneurial behavioral characteristics, supplement to the educational, promotional and informative monthly of the cooperative, number 23, 25-34.

2. Alizadehnia, M., Ommani, A.R., Noorollah Noorivandi, A., Maghsoodi, T. (2022). Determinants of Eco-Innovations in Agricultural Production Cooperatives in Iran. J. Agr. Sci. Tech. 24(1), 1-12

3. Askari, F. and Mohammadzadeh, R. (2018). Agricultural innovation system and the government's role in its development and strengthening, Promotional Journal of Agricultural Information Science and Technology, 2(3), 19-34.

4. Božič, B., Siebert, S and Martin, G. (2020). A grounded theory study of factors and conditions associated with customer trust recovery in a retailer, Journal of Business Research, 109: 440-448.

5. Kharrat, F. and Bakhshandeh, Q. (2016). Investigating the impact of creativity and innovation on the competitiveness of industrial cooperatives (the case study of Ahvaz industrial cooperatives), the first conference on accounting, management and economics with the dynamic approach of the national economy, Melayar, https://civilica.com/doc/660459

6. Maghabl, R., A., Naderi, K., Yaghoobi Farani, A. and Mohammadi, M. (2016). Identifying and determining the obstacles affecting the development of the agricultural technological innovation system. Agricultural Extension and Education Sciences of Iran, 12(1), 1-19.

7. Noorollah Noorivandi, A., Hosseein, J., Mirdamadi, M and Malekmohamadi, I. (2011). Analysis of husbandry cooperatives in Ahwaz township of Iran. African Journal of Business Managment. 6(10), 3698-3694.

8. Ommani, A, R. and Salmanzadeh, S. (2013). Identifying factors affecting innovation management in the transformation and complementary industries of livestock products in rural areas of Khuzestan province, Rural and Development Quarterly, 16(4), 121-141.

9. Rahbari, M., Samiei, R., Ashrafi, M. and Shojaee, S. (2017). Identifying the components of organizational innovation in the country's dairy cooperatives using the fuzzy Delphi method. Cooperative and Agriculture Quarterly, 7(28), 1-24.

10. Rahimi, S. and Ebrahimi, F. (2013). Examining the role of entrepreneurial characteristics of employees in the success of cooperative companies, Proceedings of the international conference on the capacities of the cooperative sector in social, economic and cultural development, Tehran: Dehkhoda Publishing.

11. Sadat Mousavi, S. and Farajollah Hosseini, S. (2012). Effective educational solutions to promote innovation management in agricultural and rural cooperatives of Tehran province, Journal of Agricultural Extension and Education Research, 6(6), 54-69.

12. Shahmirzadi, T., Hariri, N., Fahimnia, F., Bab Al-Havaeji, F. and Mottalebi, D. (2018). Analyzing the measurement and evaluation indicators of science, technology and innovation in the organization of research, education and extension of agriculture. Scientific Research Journal, 5(9), 47-66.

13. Sharifzadeh, A., Abdullahzadeh, G. H, and Sharifi, M. (2014). Pathology of agricultural technology research and development management in the framework of agricultural innovation system, Journal of Agricultural Economics and Development, 28(1), 71-82.

14. Soltani, Sh., Farajollah Hosseini, S., J. and Mirdamadi, S., M. (2011). Identifying factors affecting innovation management in small rural food industries of Tehran Province, Agricultural Economy and Development, 20(1), 109-132.

15. Varamini, N., Rezvanfar, A., Mohd Mohammadi, S., Pishbin, A.R. (2019). Analysis of competitiveness in agricultural cooperatives; The role of organizational learning and organizational innovation (case study: agricultural cooperatives of Tehran province) Rural Research, 11(2), 332-349.