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Survey the problems and solutions to improve the employment situation for Karaj Payam Noor university students in agriculture sector

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ABSTRACT

This study was conducted in order to investigate the problems and solutions to improve the employment situation in agriculture sector in Karaj Payam Noor university students. Statistical population are Included all of Karaj Payam Noor University Graduate Students (N=1320). Using Cochran formula, 120 students were selected as sample. For more credits of findings, 150 questionnaires were distributed with stratified random sampling method that finally 140 questionnaires were completed and analyzed. The main research instrument was a questionnaire that its validity was confirmed by a panel of experts and its reliability was confirmed by Cronbach's alpha coefficient ($\alpha > 0.7$). Data analysis was performed by $SPSS_{win18}$ software. The results showed that the most important barriers to employment in agriculture were classified in five factors:1-Lack of entrepreneurial culture, 2-Strategic barriers, 3-Strategic barriers, 4-Academic barriers, 5-Psychological barriers and 6- Educational barriers. Furthermore, the results of factor analysis classified solutions for improving employment in the agricultural sector in five factors: 1-Support, 2–Professional, 3-Communication – Institutional, 4-Education and 5 –skills.

Keywords: Employment, Entrepreneurship, Agriculture Employment, Students, City of Karaj

INTRODUCTION

Stability and dynamics of agriculture development and rural Reconstruction requires utilizing of human capital and skilled experts in the field of agricultural production and agricultural industries and also Extension Foundations and self-help organizations are in order to prepare and equip the infrastructure of development process (Shahbazi et al., 2006). Undoubtedly one of the most important assets of the country is human resources for economic growth and progress. So that most economists believe that finally human

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resources will determine the trend and characteristic of social and economic development of the country. Moreover, human resources form the main base of the wealth of nations. Capital and Natural resources are as subordinated production factors, although what is important in the development process is producing high quality human resources (Fuladi et al., 2001). Education is important as a mean to produce high quality human resources in the development process. Some experts state that in developing countries, the development process should start from education. In the process of development, education must go along with the development because if the development growth rate is more than development of human resources, the result will be a shortage of human power. In other side if the development of human resources growth rate is more, resulting of this phenomenon will be unemployment and non-employment for human resources. It seems particularly in recent decades the second case occurred in Iran and the result is Unemployment of the large number of university graduates, especially graduates of agriculture field (Zamanipur. 2006). So that the total number of graduates over the past decade has increased from 588 thousand to 1.5 million. Thus, agricultural education system has trained about twice the human power in the past two decades rather 50 years ago. Due to the large number of graduates of higher education, employment is one of the economic concerns of the authorities. Iran with a young population that the number of university graduates is increasing every year. Productive employment opportunities is essential to fight with unemployment and reduce economic and social problems, If a failure occurs in this context not only Poverty is spreading in society but also Crime statistics and Socio - economic violations will rise day by day. According to many economists ideas, a major challenge in the current economy is growth of productive investment and creating Job Opportunities (Salimi. 2004). Employment and unemployment challenges not only is one of the most important social issues but also regarding to the rate of population growth in the past two decades it can be the most important social challenge in the next few decades (Tajabadi et al., 2008).About a quarter of the workforce is unemployed in iran. Statistical Center of Iran announced that the youth unemployment rate is about 21.8 percent, almost double the average rate of unemployment in the world. While the highly educated workforce in terms of quantity has grown significantly similar to many developing countries. For example, in the years since 88-1387 to 84-1383 about 890 thousand graduates in agriculture field have been graduated from state and private Universities (Jamshidifar et al., 2010). Now 240 thousand graduates in agriculture and natural resources are a member of the Engineering Council, According to official statistics from this organization, about 57 thousand graduates in the agricultural field are job seekers (Nasrollahi, 2009). Therefore, one of the challenges facing different communities is Graduates who have not required Individual abilities and skills to launch a business. Although the agricultural sector has the comparative advantages, but in terms of employment Development is not considered. Agricultural sector in Iran and most countries has the potential for production and employment that cannot be compared to other economic sectors. Can play role as an important sector in job creation. Therefore, the Change from job Approach to agricultural activities have been Considered by most experts (Maher, 1997 ;Shams azar, 1994, Anonymous,2006; Motamedie, 2006 ; Zahedi Mazandaranie, 2004). In present situation, one of the factors that led to changes in economic, social and industrial conditions, in a country, is Entrepreneurial activity and tendency of college graduates to original and new jobs in agriculture sector (Samadi & Shirzadi, 2007). Therefore, it can be said that the severe crisis unemployment and employment is in the country and an imbalance in supply and demand for labor in the country. Thus, several studies have been investigated the employment and unemployment

situation among the agriculture graduates. Zamani (2001) in your investigation concluded that the lack of practical experience and little knowledge create employment barriers for farming graduates in the private sector.Moghanizadeh (2001). Vasheghani et al.,(2004) in researches showed that The most significant barriers to employment among graduates is Low quality of agricultural education. Therefore, graduates cannot take farming jobs. Patel et al., (2001). in their study suggests that the most important barriers for agricultural graduates employment are lack of Combining between hardware and software skills, Creative and critical thinking, Personal and professional growth, lack of management skills and communication. Anini et al., (2006) The research showed globalization and rapid technological change cause intense competition in the labor market and believe that it needs to increase higher education to provide the required skills. But the evidences suggest that graduate unemployment is increasing Due to Lack of coordination between their skills and agricultural needs in many countries. Postigo (2002). Weligamage, (2005). showed in your investigation that the main barriers to employment for graduates in agriculture are lack of courses and entrepreneurship training workshops at universities and teaching problem solving techniques. Lathain et al (2000). Brockhaus et al., (2001). in the investigation concluded that the poor learning environments in universities is because of too much emphasis on theoretical, lack of entrepreneurial training in agriculture and other, simply cause to loss of employment of graduates in agriculture. Therefore, the agricultural education is obstacle to employment among graduates in the agricultural sector. It is clear, employment opportunities by government agencies are not enough for all graduates and it has been demonstrated as unemployment among young graduates (Poorkarimi., 2006). On the other hand, despite the large number of trained manpower when we can hope to attract them in the private sector that looking for a changing knowledge we need to create insight and skills change. In this regard, several studies have been conducted to change knowledge and awareness and to improve the employment situation of graduates of higher education in agriculture that are mentioned. Li et al., (2008) Atchoarena and Holmes., (2004) and Karbasion et al., (2005) express in their research that applied sciences skills at the University, proportional wih agricultural sector and labor market needs, provide basic facilities for graduates in agriculture, provide entrepreneurial training, Can organize agricultural graduates to be effective employment. James (2005) in the studies concluded that the scientific and applied training and increasing practical courses at Universities are the most important action to attract graduates in the agriculture sector. Crowder et al., (1999) the research has noted that applied science education and business skills training, have an important role in empowering farmers and educators, moreover, it can play an important role in graduates employment. Mack Bannatyne et al (2003) in the investigation concluded that the relationship between educational content and employment needs in the agricultural sector, Science and Applied Education, relationship between the university and agricultural centers are as a appropriate way for graduates' employment in the agricultural sector.Kosravipoor (2009) in the research concluded that the most important educational guideline for development of employment among the graduates in Khuzestan Agricultural Education Center, include extracurricular classes, giving information about labor market needs, changes in curriculum, preparation training and strategic planning, use a variety of teaching methods, use instructors with a high scientific level, business skills training and providing facilities for the development of employment among graduates. Mirkzadeh et al (2011), Asadi (2010) in their review concluded that the most important factors influencing agricultural graduates' employment status are professional skills, entrepreneurial and practical skills, communication skills between industry and

university and providing social and economic fields. Katajavuori et al (2006) in the research concluded that Practical training have Effective role in improving Graduates job status. These courses not only will increase the amount of student learning but also strengthens the relationship between Universities and farms. Lin (2006) states in agricultural higher education system should be Special emphasis on training, Practical skills and professional skills in order to have Competitiveness power among students for obtaining jobs in a competitive labor market. He offers to improve this situation that universities should have appropriate support and cooperation with the agriculture sector needs until graduates can gain required ability to work in agriculture sector. Hisa et al (2008) concluded in their study in Taiwan that the most important strategy to improve student engagement in agriculture are education and research centers at the universities in order to respond to community needs, Labor market needs and skills required in the agriculture sector. Swanson et al (2007) concluded in their research that strengthening links between universities and private companies and commercial farms, Prepare students to enter to agricultural businesses. Krueger et al (2000), Autio et al (2001), Audet (2002), Alexei and Kolvereid (1999) and Van Gelderen et al (2006) concluded that the most important strategy to solve the unemployment problem in the higher education system, are creating entrepreneurial training workshops and courses and the self-employment skills. Based on the above it can be said that the training program does not match with labor market needs and demand of occupation in the agricultural sector. In addition, the economic crisis in many developing countries has created abnormal situation in recent years. So that possibility To attract all graduates in agricultural and farming fields in public sector that was common in the past; now There is no other chance for students. Those graduates to entry into employment in this sector are faced with serious problems. According to Current conditions in the country and Agricultural Education condition it can be said that over nearly two decades from beginning of activities in Applied Science agricultural education system in Iran and Still has not reached to the main target that was education of required workforce in various sectors. Also, the Agriculture graduates don't have required skills in the agricultural sector. Therefore it is very important to investigate about problems and solutions in this subject. The importance of this study, this is that so far has not been studied any research among students of Payam Noor University as one of the higher education system in Iran. In this regard, the main target of study is Analysis of obstacles and solutions to improve the employment situation of agriculture students in Karaj Payam Noor University. The specific objectives are: Survey personal and professional characteristics among students; Analysis and prioritization obstacles of employment among students; Analysis and prioritization strategies for improving employment among students.

MATERIAL AND METHODS

The purpose of this study is applied, in term of controlling variables is non experimental and in term of collecting data is field research. According to Time range this study was a cross sectional and data and information were collected in November 2012. Statistical population include all graduate students at the Karaj Payam Noor university (N = 1320). Using Cochran formula, 120 students were selected as sample. For more credits of findings, 150 questionnaires were distributed with stratified random sampling method

that finally 140 questionnaires were completed and analyzed. The main tool of research was a questionnaire developed by the researchers and Pretest. The questionnaire consisted of three parts: The first 10 items related to personal, social and economic characteristics. The second Consists of 21 items to assess employment obstacles among students studying in agriculture field and the third part of the questionnaire is 20 questions to determine strategies for improving agricultural employment among students. To determine the validity of the questionnaire was used Panel of experts, including experts in Karaj Payam Noor University and Department of Agricultural Management and Development of Tehran University. Based on experts' ideas and suggestions, necessary amendments were taken in questionnaire. To estimate the reliability of questionnaire was used Cronbach's alpha coefficient that the alpha values for the obstacles to employment is equal 0.9 and for Strategies to improve employment is equal 0.92. Regarding to calculate Cronbach's alpha coefficients for each section of the questionnaire is more than 0.7; therefore, the questionnaire had good reliability for research. In order to analyze the data in both descriptive and inferential section was used SPSS software version 18. Thus, in the descriptive statistics were used frequency, percentage, mean and standard deviation and in the inferential statistics was used factor analysis.

RESULTS

- Survey personal and professional characteristics among students;

The results showed that average age was 23.03 years and standard deviation was 2.56. Also range of age was between 18 to 38 years. Their average household income was 791.94 thousand toman and standard deviation was 584 thousand toman. Average use of communication media among students was 5.67 hours a day with standard deviation 3.49 hours.

- Analysis and prioritization obstacles of employment among students

In order to prioritize items of the employment obstacles Karaj Payam Noor University graduate students in the agricultural sector was used the coefficient of variation. The results are shown in Table 1. Based on The results in Table, The most significant barriers to employment in the agricultural sector are "Lack of facilities and equipments for practical works" and "Administrative difficulties in implementing policies and strategic plans of employment in the agricultural sector". However, "Lack of Faculty members' information about activities in production units and agricultural sector" and "Not determined Minimum capacity of scientific and practical for graduation" are less importance items.

Next analysis is statistical analysis for employment barriers for students in agriculture sector that was used exploratory factor analysis for this purpose. To determine the suitability of data for factor analysis was used KMO coefficient and Bartlett's test. KMO value is equal 0.818. Also, Bartlett's test is equal 1026.197 ($p = 0.000$) which was significant at one percent level. The results showed that the data are suitable for factor analysis. In this analysis, five factors were extracted with values greater than 1 that 61.34 explained percent of the total variance and 38.66 remaining percent is related to factors that were not identified in the analysis. According to values In Table 2, the First factor has the highest proportion (3.049) and the last factorhas the lowest proportion (1.197) to explain the total variance.

In order to isolate the factors was used the Varimax Rotation. The factor load of each variable has been shown after rotation factor in Table 3. After survey items (variables) for each factor, were named respectively: 1- Lack of entrepreneurial culture 2- Strategic Barriers 3- Academic barriers 4- Psychological Barriers 5- Educational Barriers

Analysis and prioritization strategies for improving employment among the subjects

In order to prioritize Strategies to improve the employment situation in agriculture In Karaj Payam Noor University was used coefficient of variation. The results are in Table 4**.** According to The results in Table 5, The most important way to improve employment in the agricultural sector are" Creation of new job opportunities in various fields of agriculture" and " Adaptation educational programs with agricultural job requirements and remove non practical courses". However "Design of new employment policies and regulations" and" Developing student organizations" have less importance to improve student employment in the agriculture sector.

To analyze the Strategies for improving employment among students in Karaj Payam Noor University was used exploratory factor analysis. To determine the suitability of data for factor analysis was used KMO coefficient and Bartlett's test. KMO value is equal 0.852. Also, Bartlett's test is equal 1311.514 ($p = 0.000$) which was significant at one percent level. The results showed that the data are suitable for factor analysis. In this analysis, five factors were extracted with values greater than 1 that 69.94 explained percent of the total variance and 30.06 remaining percent is related to factors that were not identified in the analysis. According to values In Table 2, the First factor has the highest proportion (3.71) and the last factor has the lowest proportion (1.96) to explain the total variance.

In order to isolate the factors was used bthe Varimax Rotation. The results of this section are given in Table 6. After isolation items (variables) for each factor were named respectively: 1- Supporting job opportunities 2- Professional skills 3- Communication – Institutional skills 4- Instructional strategies 5- Expertness Training Skills.

CONCLUSION

Most of countries involved with employment problems but the multiplicity of problems and some of them are unknown in developing countries is a complicated issue. Nowadays management use the scientific method to understand and control the problem of employment and turn challenges into opportunities, to accelerate the motion of development in the country. Higher education system is one of the pillars that trains experts in the country according to surveys in the field of education can be announced according to the several reasons has not been achieved the training of experts and creation of employment for these forces in society. Regarding importance of agriculture in employment of graduates, unfortunately research has shown that enough attention has not been for graduates' employment in the agricultural sector. Therefore, survey of barriers and strategies for improving employment in the agricultural sector can be important. In this regard, this study investigates the barriers and solutions to improve the employment in the agriculture sector for Payam Noor University students. Based on The results, the most significant barriers to employment in the agricultural sector are "Lack of facilities and equipments for practical works" and "Administrative difficulties in implementing policies and strategic plans of employment in the agricultural sector". These findings are consistent with Zamani (2001), Moghanizadeh (2001), Vasheghani et al (2004) and Anini et al (2006). In addition, Factor analysis showed that the most significant barriers to

students' employment in agriculture sector are five factors: Lack of entrepreneurial culture, Strategic barriers, Academic barriers, psychological barriers and educational barriers. The results of this section are consistent with Lathain et al (2000), Brockhaus et al (2001), Mirkzadeh et al (2011), Patel et al (2001), Postigo (2002), Moghanizadeh (2001), Vasheghani et al (2004), Zamani (2001). In addition, the most important ways to improve their employment in the agricultural sector are "Creation of new job opportunities in various fields of agriculture" and" Adaptation educational programs with agricultural job requirements and remove non practical courses". The results of this section are consistent with Zamani (2001), James (2005), Mack Bannatyne et al (2003), Mirkzadeh et al (2011), Katajavuori et al (2006), and Lin (2006). In addition, the results showed that the most important way to improve the employment situation among students is five factors: 1- Support from Job opportunities 2- Professional skills 3- Communication – Institutional skills 4- Instructional strategies 5- Expertness Training Skills. The results of this section are consistent with Mirkzadeh et al (2011), jalali (2005), Alexei and Kolvereid (1999), Audet (2000), Autio et al (2001), Krueger et al (2000), Van Gelderen et al (2006), Kosravipoor et al (2009), Mack Bannatyne et al (2003), James (2005), Zamani (2001), Katajavuori et al (2006), Lin (2006), Hisa et al (2008), Swanson et al (2007). In this regard can be suggested that:

1- According to the most significant barriers to employment for students the practical limitations are Because, Payam Noor University has less practical facilities. Thus, it is recommended that managers provide required Practical facilities and equipment.

2- Regarding to one of the barriers to employment for students is lack of entrepreneurship courses in Payam Noor University. Thus, it is recommended that Workshop and entrepreneurship training courses should hold in Payam Noor University that students acquire abilities in practical activities in the agricultural sector.

3- Since one of the major barriers to employment in the agricultural sector in Payam Noor University is educational barriers. Thus, it is recommended that Flexibility in courses should be in universities and also emphasis on the practical aspect of the work.

4- Regarding to one other obstacle to employment is college barriers in Payam Noor University; therefore, it is recommended that university should use Experienced and skilled instructors in the agricultural sector.

5- Considering that one of the ways to improve the employment situation in agriculture sector is Supporting Job opportunities; therefore, it is recommended that government should support and provide facilities for students to work in agriculture sector.

6- One other factors to improve the employment situation among students is Communication – Institutional strategies, in this regard it is suggested that Payam Noor University should connect to farming centers. Moreover required skills for agricultural sector such as self-employment and marketing Skills should be taught to students in Payam Noor University.

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Table 1 - items Prioritization related to students' employment obstacles

ITEMS	Mean	CV	SD	rank
Deficiency practical facilities and equipment	4.24	22.6	0.959	1
Administrative difficulties in implementing employment policies and programs	3.97	25.9	1.03	2
Practical inability of teachers in delivering accurate and useful	3.7	26.9	0.998	3
Desire to degree among agriculture students	3.87	27.6	1.07	4
Lack of development among private employment agencies	3.57	28.6	1.07	5
Lack of training programs based on students' abilities and interests	3.85	28.8	1.11	6
Failure universities in making scientific spirit among students	3.73	28.9	1.08	7
Mismatch between education content and agriculture required skills	3.79	29	1.10	8
Not getting promoted culture employment in agriculture	3.79	29.2	1.09	9
Lack of development in graduates association and employment	3.89	29.3	1.14	10
The large number of applicants and competition for jobs	3.77	29.9	1.13	11
Lack of motivation for students to work in agriculture sector	3.82	30	1.15	12
Lack of attention in universities to develop practical skills	3.87	30.4	1.18	13
Lack of entrepreneurial culture and shortage agricultural entrepreneurs	3.82	30.6	1.17	14
The absence training and creative thinking in the colleges of agriculture	3.9	30.7	1.20	15
Shortage of information on labor market conditions for agricultural	3.84	31.7	1.20	16
Mismatch between student potential and labor market needs	3.9	31.7	1.24	16
Lack of proper training science - applied	3.83	30.8	1.18	17
Inefficiency of faculty members in training required specialized graduates in the agriculture sector	3.7	31.9	1.21	18
Not determined minimum capacity of scientific and practical for graduation	3.66	33.3	1.22	19
Lack of faculty members' information about activities in production units and agricultural sector	3.57	33.3	1.19	20
Scale: 1- Very low 2-Low 3- Medium 4- High 5-Very high				

Table 2- Number of extracted factors and the proportion of each factor

Factor number	Eigenvalue	Percentage of variance	Cumulative percentage of variance
1	3.049	14.51	14.51
2	2.946	14.02	28.53
3	3.782	13.24	41.77
4	2.113	10.06	51.83
5	1.997	9.51	61.34

Table 3- Analysis of employment obstacles among students

Factor	Items for each factor	Factor load
Entrepreneurial Barriers	Lack of Development in Entrepreneurial firms	0.77
	The number of applicants and competition for jobs	0.717
	Non-spreading Entrepreneurial culture and the low number of agricultural entrepreneurs	0.783
Strategic Barriers	Practical problems in implementing employment policies and strategic plans	0.51
	Low information about the labor market situation and future career	0.665
	Lack of educational programs based on students' abilities and interests	0.857
	Lack of training courses on creative thinking	0.77
	Lack of attention to Practical skills	0.536
Academic Barriers	Failure universities in making scientific spirit among students	0.531
	The lack of scientific and practical capabilities for graduation	0.505
	Lack of faculty members' information about activities in production units and agricultural sector	0.722
	Lack of proper training for scientific – practical courses	0.776
	Inefficient faculty members in training specialized individuals	0.734
Psychological Barriers	Desire to degree among agriculture students	0.723
	Lack of motivation for students to work in agriculture sector	0.845
Educational Barriers	Mismatch between education content and agriculture required skills	0.841
	Mismatch between the student's current capacity with needs of the agricultural sector	0.753

Table 4- prioritization of strategies for improving employment among students

items	Mean	SD	CV	rank
Creation of new job opportunities in various fields of agriculture	4.2	0.968	23	1
Adaptation educational programs with agricultural job requirements and remove non practical courses	4.1	0.961	23.4	2
Cooperation Agriculture and Natural Resources Engineering system in employment of graduates	4.16	0.991	23.8	3
Education of Self-employment and business skills for students	4.16	1.07	25.7	4
Flexibility in courses and new topics of Agriculture	3.97	0.991	26.7	5
Creation a fund to support graduates in agriculture sector	4	1.1	27.5	6
Facilitating of government services in the employment of graduates	4.05	1.12	27.6	7
Increasing credits and facilities such as loans for graduates	4.18	1.17	27.9	8
Planning to visit successful companies and organizations	4	1.12	28	9
Creating a strong apprenticeship system in universities	4.05	1.14	28.1	10
Supporting the private sector to employ agricultural graduates	3.93	1.12	28.4	11
Establishing a strong information system to inform students about requirements of the agricultural sector	4	1.16	29	12
Increasing Marketing and business skills	3.93	1.15	29.2	13
Emphasis on practical skills in agriculture	4.04	0.961	29.4	14
Creating connection between agricultural education Content and agricultural needs	3.84	1.14	29.6	15
Increasing the practical courses	3.96	1.2	30.3	16
Support and eliminate barriers in the field of self-employment and business	3.81	1.16	30.4	17
Creating and supporting NGOs in agriculture	3.84	1.18	30.7	18
Creation and developing student organizations	3.84	1.18	30.7	18
Design of new employment policies and regulations	3.8	1.26	33.1	19
Scale: 1- Very low 2-Low 3- Medium 4- High 5-Very high				

Table 5- Number of extracted factors and the proportion of each factor

Factor number	Eigenvalue	Percentage of variance	Cumulative percentage of variance
1	3.71	18.55	18.55
2	3.19	15.97	34.32
3	2.86	14.3	48.62
4	2.1	10.52	59.14
5	1.96	9.8	68.94

Table 6- Analysis of strategies to improve employment for Karaj Payam Noor universities students

Factor	Items for each factor	Factor load
Supporting job opportunities	Supporting the private sector to employ agricultural graduates	0.77
	Creating and Developing student organizations	0.717
	Increasing credits and facilities such as loans for graduates	0.783
	Facilitating of government services in the employment of graduates	
	Design of new employment policies and regulations	
Professional skills	Creation of new job opportunities in various fields of agriculture	0.51
	Education of Self-employment and business skills for students	0.665
	Emphasis on practical skills in agriculture	0.857
	Support and eliminate barriers in the field of self-employment and business	0.77
Communication – Institutional skills	Creating connection between agricultural education Content and agricultural needs	0.531
	Cooperation Agriculture and Natural Resources Engineering system in employment of graduates	0.505
	Creation a fund to support graduates in agriculture sector	0.722
	Planning to visit successful companies and organizations	0.776
	Establishing a strong information system to inform students about requirements of the agricultural sector	0.734
Instructional strategies	Flexibility in courses and new topics of Agriculture	0.723
	Adaptation educational programs with agricultural job requirements and remove non practical courses	0.845
Expertness Training Skills	Increasing Marketing and business skills	0.841
	Creating a strong apprenticeship system in universities	0.753
	Increasing the practical courses	