

Study on Employment Flow of Agricultural Graduates in Agricultural and Forestry Universities

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Abstract

On the basis of data of employment of graduates in 2008 to 2011 majoring in agriculture, this article made a statistics and analysis of employment flow of agricultural graduates and the causes for the flow of talents, with the aim of providing guidance for pursuit of employment and choosing of an occupation in terms of taking part in the postgraduate entrance exams, industrial distribution and work region, etc.

Keywords: agricultural and forestry university, agricultural graduates, employment flow

In the past few years, prominence of the pressure of university graduates in the total amount of employment and structural contradictions has made the employment situation of university students still austere. The issue of employment of university students is not related with the social stability and economic prosperity of the nation, but also is connected with the immediate interests of university student individuals and their families. As the subject of employment, university students are faced up with the employment topic of how to position the employment and how to choose an occupational target in the face of fierce market competition and enormous employment pressure. Yet, the concept of employment of university students has a direct effect on their choice of occupation and selection of employment region. With continuous development and improvement of the employment market, the concept of employment of university students will also gradually become rationalized and their employment targets become more and more diversified.

1. Data about Sample Analysis

The sample data that this article used were the employment data about graduates majoring in agriculture in the year 2008 to 2011 in an agricultural and forestry university. The data calculation was based on the calculating method and deadline specified by the Department of Education in the province and the employment units referred to the units on the employment agreement that students signed.

2. Employment Direction of Agricultural Graduates

2.1 Taking Part in the Postgraduate Entrance Exams

In the face of the enormous employment pressure, whether pursuing advanced studies or choosing direct employment has become an important selection for university students to make. In the past few years, with continuous expansion in the scale of recruitment of postgraduates, quite a large number of university graduates have taken part in the main forces of taking part in the postgraduate entrance exam which has become one of major tendencies for university students to select. The following table makes a statistic analysis of the situation of agricultural graduates in a university who took part in the postgraduate entrance exam.

Table 1. Statistics of agricultural graduates in 2008 to 2011 who took part in the postgraduate entrance exam

Year	Major			
	2008	2009	2010	2011
Rural regional development	3.42	4.26	6.71	10.46
Agriculture	16.44	17.02	24.39	22.22
Agriculture (tobacco)	7.53	2.13	5.49	10.46
Biotechnology	33.56	33.33	18.90	13.73

Plant protection (including plant quarantine)	10.27	18.44	7.93	10.46
Plant protection (pesticide)	3.42	9.22	6.10	5.88
Plant science and technology	12.33	7.80	10.37	10.46
Chinese herbal medicine cultivation and identification	13.01	7.80	7.32	6.54
Seed science and engineering	—	—	12.80	12.42
Total	25.21	27.59	24.70	23.36

Generally speaking, the proportion of the population who took part in the postgraduate entrance exam maintains a relatively stable level and the population who took part in the postgraduate entrance exam accounted for 25% or so in the past four years. Considering the inside condition of the majors, the proportion of agricultural graduates and biotechnology graduates who took part in the postgraduate entrance exam remains at a high level, the proportion of graduates majoring in rural regional development who took part in the postgraduate entrance exam is continuously increasing, from 3% to 10% and the proportion of graduates majoring in plant protection who took part in the postgraduate entrance exam is relatively low.

2.2 Nature of Work Unit

Statistics of the nature of work unit of graduates can accurately reflect the intention of occupation selection of graduates and their developmental direction in the future, offer effective information for the guidance work of graduate employment and provides certain reference evidence for cultivation of both quality and capacity of students who are still in the university.

Table 2. Statistics of the nature of work unit of agricultural graduates in the year 2008 to 2011

	Rural regional development	Agriculture	Agriculture (tabacco)	Biotechnology	Plant protection	Plant protection (pesticide)	Plant science and technology	Chinese herbal medicine	Seed science and engineering	Average
Government Organization and Institution	12.12	2.04	0.00	3.10	11.11	4.55	5.41	3.90	-	4.84
20 State-owned enterprise	0.00	1.02	10.17	1.55	5.56	18.18	6.76	0.00	-	3.63
08 Private enterprise	36.36	61.22	52.54	43.41	48.15	18.18	44.59	50.65	-	47.15
Grass-root project	18.18	10.20	5.08	2.33	3.70	13.64	4.05	0.00	-	6.22
Other	33.33	25.51	32.20	49.61	31.48	45.45	39.19	45.45	-	38.17
Government Organization and Institution	9.68	14.94	22.58	2.75	10.61	9.30	4.35	8.96	-	9.39
20 State-owned enterprise	9.68	5.75	16.13	2.75	7.58	4.65	0.00	0.00	-	5.09
09 Private enterprise	61.29	42.53	45.16	42.20	40.91	51.16	69.57	67.16	-	51.08
Grass-root project	9.68	6.90	6.45	1.83	0.00	4.65	2.17	7.46	-	4.70
Other	9.68	29.89	9.68	50.46	40.91	30.23	23.91	16.42	-	29.75
Government Organization and Institution	6.67	9.02	7.94	1.15	11.27	9.52	7.46	4.29	4.48	6.78
20 State-owned enterprise	8.00	3.28	11.11	0.00	1.41	0.00	1.49	5.71	2.99	3.77
10 Private enterprise	54.67	45.08	57.14	57.47	56.34	64.29	59.70	65.71	56.72	56.17
Grass-root project	4.00	1.64	0.00	0.00	8.45	0.00	1.49	2.86	2.99	2.41
Other	26.67	40.98	23.81	41.38	22.54	26.19	29.85	21.43	32.84	30.87
Government Organization and Institution	16.10	9.16	10.77	5.26	17.39	7.41	12.50	0.00	7.58	10.12
20 State-owned enterprise	2.54	6.11	7.69	1.32	4.35	7.41	0.00	14.06	4.55	5.06
11 Private enterprise	47.46	51.15	43.08	52.63	43.48	44.44	44.64	51.56	50.00	48.21
Grass-root project	1.69	3.05	1.54	1.32	1.45	0.00	1.79	1.56	1.52	1.79
Other	32.20	30.53	36.92	39.47	33.33	40.74	41.07	32.81	36.36	34.82

Generally speaking, the proportion of graduates who work in the state organs and public institutions is obviously increasing, from 4.84% of the total population among graduates in the year 2008 to 10.12% of the total population among graduates in the year 2011, increasing a percentage of 5.28. Considering the majors, plant protection is relatively stable, with a proportion above 10% each year and as high as 17.39% in the year 2011. Generally speaking, the proportion of graduates majoring in rural regional development, agriculture and agriculture (tobacco) who work in state organs and public institutions is higher than other students majoring in other majors. However, influenced by the national policy of admission by examination and the total population, great difference exists between graduates who graduate in different years.

From the above table, it can be found that, the proportion of graduates who work in state-owned enterprises is relatively low, and the proportion of graduates in the year 2008 to the year 2011 changes between the 3.63 and 5.09, among which graduates majoring in agriculture (tobacco) have a relatively high proportion. Since state-owned enterprises of agriculture are few and provide limited employment positions for graduates, thus tobacco enterprises occupy an obvious advantage in the same industry and absorb a large number of graduates to search for employment.

According to the statistics, private enterprises are the major channel to absorb graduates. Each year, there are approximately a number of 50% graduates who choose to choose employment in private enterprises and the proportion of graduates in the year 2010 was the highest, with a proportion of as high as 56.17%. Since private enterprises are flexible in management, broad in developmental space and have large flow of employees, they become a primary choice for graduates to seek for employment.

According to the statistic situation, the proportion of graduates who choose to work in grass-root projects is relatively low and presents a descending tendency, descending from 6.22% in the year 2008 to 1.79 in the year 2011. Treatment and way out in grass-root projects are the primary elements that restrain graduates from taking part in grass-root projects.

2.3 Selection of Working Region

Selection of working region is a major element that affects graduates in their searching for an occupation and choosing an employment. Study on the direction of employment region of students who have graduated can better grasp the intension of search for an occupation of graduates and better guide the graduates in understanding the employment tendency and in adapting to the fierce talent competition market.

2.3.1 An Analysis of the Place of Birth of Graduates

The place of birth of graduates has a direct influence upon graduates selection of the working region. We made an analysis of the place of birth of graduates in the year 2008 to the year 2011 with an aim of finding out its relation with selection of the working region.

Table 3. Statistics of place of birth of graduates majoring in agriculture in the year 2008 to 2011

		Rural regional development	Agriculture	Agriculture (tobacco)	Biotechnology	Plant protection	Plant protection (pesticide)	Plant science and technology	Chinese herbal medicine	Seed science and engineering	Total
2008	Sichuan	59.09	58.16	86.44	42.64	68.75	68.18	77.03	71.43	-	62.52
	Chongqing	16.67	14.29	5.08	20.16	16.67	13.64	10.81	11.69	-	14.16
	Other	24.24	27.55	8.47	37.21	27.08	18.18	12.16	16.88	-	23.32
2009	Sichuan	77.42	57.47	74.19	57.80	72.73	67.44	80.43	71.64	-	67.71
	Chongqing	12.90	11.49	9.68	11.01	6.06	9.30	8.70	14.93	-	10.76
	Other	9.68	31.03	16.13	31.19	21.21	23.26	10.87	13.43	-	21.53
2010	Sichuan	76.00	76.23	77.78	67.82	85.92	80.95	88.06	80.00	85.07	79.07
	Chongqing	5.33	4.92	4.76	10.34	4.23	7.14	5.97	5.71	5.97	6.02
	Other	18.67	18.85	17.46	21.84	9.86	11.90	5.97	14.29	8.96	14.91
2011	Sichuan	77.97	70.23	75.38	67.11	71.01	77.78	62.50	65.63	66.67	70.68
	Chongqing	9.32	10.69	10.77	10.53	10.14	7.41	10.71	12.50	10.61	10.42
	Other	12.71	19.08	13.85	22.37	18.84	14.81	26.79	21.88	22.73	18.90

From Table 3, it can be seen that the places of birth of graduates are mainly concentrated within Sichuan Province and graduates who graduated in 2008 and in 2009 all accounted for more than 62% of the total population and graduates who graduated in 2010 and 2011 all accounted for more than 70%. Besides, Chongqing is also a major place of birth of graduates. In addition to graduates who graduated in 2006, the proportion of other graduates all exceeds 10% of the total population.

2.3.2 Statistical Analysis of Graduates Who Choose to Work in Sichuan and Chongqing

Table 4. Statistics of work of agricultural graduates in the year 2008 to 2011 in Sichuan and Chongqing

Region Major	2008			2009			2010			2011		
	Sich uan	Chong qing	Outside Sichuan									
Rural regional developm ent	63.64	18.18	36.36	80.65	11	19.35	78.67	2.67	21.33	77.1	9.32	22.88
Agricultu re	59.18	11.22	40.82	59.77	9.2	40.23	64.75	2.46	35.25	67.9	8.4	32.06
Agricultu re (tobacco)	71.19	6.78	28.81	80.65	6.5	19.35	74.6	1.59	25.4	66.2	16.92	33.85
Biotechno logy	55.04	8.53	44.96	73.39	8.3	26.61	58.62	9.2	41.38	67.1	9.21	32.89
Plant protection	53.7	11.11	46.3	63.64	4.6	36.36	66.2	4.23	33.8	63.8	13.04	36.23
Plant protection (pesticide)	54.55	9.09	45.45	55.81	7	44.19	61.9	2.38	38.1	70.4	11.11	29.63
Plant science and technolog y	74.32	6.76	25.68	80.43	8.7	19.57	83.58	4.48	16.42	62.5	12.5	37.5
Chinese herbal medicine	76.62	7.79	23.38	70.15	15	29.85	77.14	7.14	22.86	60.9	17.19	39.06
Seed science and engineeri ng	--	--	--	--	--	--	71.64	8.96	28.36	71.2	4.55	28.79
Total	63.56	9.84	36.44	69.86	9	30.14	70.33	4.82	29.67	68.2	10.86	31.85

Generally speaking, a number of graduates who account for more than 63% of the total population choose to work within Sichuan Province and a proportion of approximately 30% of graduates choose to work outside Sichuan Province. The graduates who choose to work within Sichuan Province increase from the proportion of 63.56 to 68.2, whereas the graduates who choose to work outside Sichuan Province descend from the proportion of 36.44 to 31.85. In the meantime, the proportion of graduates who choose to work in Chongqing also has increased. Considering the major, graduates majoring in agriculture, biotechnology and plant protection who choose to work outside Sichuan Province have always had a high proportion, but the general trend is a descending one, while graduates majoring in plant science and rural regional development have a relatively small proportion, with a proportion lower than the average level.

It can be found through a comparison of Table 3 and Table 4, university students who have a birth place within Sichuan Province almost choose employment within Sichuan Province. However, generally speaking, the tendency changes from flow into Sichuan Province for employment by graduates with a birth place outside Sichuan Province to flow outside Sichuan Province for employment by graduates with a birth place inside Sichuan Province. Quite a large majority of graduates who graduate in the year 2008 to the year 2010 choose to work in Chongqing and a proportion of almost 30% graduates with a birth place of Chongqing choose to search for employment in other provinces outside Sichuan Province. A tendency of flow into Chongqing for employment by graduates with a birth place outside Chongqing appeared in 2011.

2.3.3 An Analysis of Places with Concentrated Employment

In order to better guide graduates in seeking for employment outside the province and expand the employment market outside the province, we made an statistics on the five provinces outside Sichuan with most concentrated employment and got the following result (the proportion in the table means the percentage of the population of graduates who work outside Sichuan Province to the total population of graduates who work outside Sichuan Province).

Table 5. The five outside provinces (cities) with most concentrated employment of agricultural graduates in the year 2008 to 2011

Year	The five outside provinces (cities) with most concentrated employment										Total
2008	Chongqing	20.64	Xinjiang	12.84	Guangdong	8.72	Jiangxi	5.96	Hunan	4.59	52.75
2009	Chongqing	23.59	Jiangsu	6.67	Guangdong	6.67	Hunan	5.13	Xinjiang	4.62	46.67
2010	Chongqing	16.08	Jiangxi	13.07	Beijing	10.55	Jiangsu	7.54	Shaanxi	5.53	52.76
2011	Chongqing	34.11	Yunnan	6.07	Xinjiang	5.14	Beijing	4.67	Guangdong	3.74	53.74

Chongqing is a place outside Sichuan Province that has concentrated employment by graduates, has a proportion that ranks the top positions among all provinces and cities each year, and has a proportion increasing from 20.64% in the year 2008 to 34.11% in the year 2011, with an increase of 14 percentages. Other provinces offer a lot of employment opportunities for graduates majoring in agriculture owing to large-scale agricultural enterprises, such as, The Xinjiang Production and Construction Corps, Zhongxun in Guangdong Province, Yurun in Jiangsu Province, Zhengbang in Jiangxi Province and so on, so graduates have an obvious tendency of flow.

In order to grasp the situation of graduates who search for employment in cities within Sichuan Province, we here make a statistics on the five cities within Sichuan Province with most concentrated employment of graduates (the proportion in the table refers to the percentage to the total population of graduates who search for employment within Sichuan Province).

Table 6. The five cities within Sichuan with most concentrated employment of agricultural graduates in the year 2008 to 2011

Year	The five cities within Sichuan with most concentrated employment									
2008	Chengdu	30.62	Ya'an	28.46	Mianyang	2.98	Deyang	2.44	Ziyang	1.63
2009	Chengdu	30.03	Ya'an	29.10	Yibin	4.64	Mianyang	3.10	Leshan	1.55
2010	Chengdu	41.20	Ya'an	26.02	Mianyang	6.99	Panzhihua	2.17	Deyang	2.17
2011	Chengdu	51.27	Ya'an	30.88	Mianyang	5.95	Deyang	3.12	Leshan	2.83

Each year, Chengdu is a first priority for graduates to search for employment within Sichuan Province and ranks the first each year, with a proportion of 30.62% in the year 2008 increasing to 51.27% in the year 2011, with an increase of 20 percentages and occupying more than half of the total population search for employment within Sichuan Province. As the capital city of Sichuan Province, Chengdu has developed economy and many employment opportunities and offer a broad development space for graduates.

Since there are an approximate proportion of 25% students who choose to take part in the postgraduate entrance each year, a large majority of graduates choose to leave in their former university, which makes Ya'an become the second city in Sichuan Province that has most graduates who search for employment and keep a relatively stable condition. Mianyang, Deyang, Leshan and Ziyuan, etc., are also the major cities that graduates choose to seek for employment since they have relatively developed economy.

3. Conclusion

Through the above analysis of the employment tendency of graduates majoring in agriculture in the year 2008 to 2011, we come to the following conclusions:

1) Employment and taking part in the postgraduate entrance exam are the major two choices for graduates in their selection of a job. With continuous expansion in recruitment scale of postgraduates, continuous increased demands of employment positions on the educational background of graduates and a broader development platform and development space of those with higher educational background than those with lower educational background, more and more graduates tend to take part in the postgraduate entrance exam. In the meantime, in

the current austere employment situation, graduates have the double ideological pressure of the psychology to avoid employment and improvement of their own quality and capacity, which makes the number of graduates who choose to take part in the postgraduate entrance exam exhibit a tendency of increasing.

2) It is indicated through an analysis of the nature of work unit of graduates, the state organ and public institution are still the primary choice for employment of graduates majoring in agriculture and civil servant and public institution's admission examinations absorb a lot of graduates to take part and the civil servants frenzy still exists. Universities, scientific institutes and public institutions of agricultural population that are related with profession also receive favor of graduates. Owing to their flexible management mode, perfect development space and convenient flow of talents, private enterprises become a major channel for graduates to search for employment. By contrast, as a result of the constraint of treatment and way out of grass-root projects, graduates' enthusiasm in grass-root projects declines.

3) In terms of selection of working region, a large majority of graduates majoring in agriculture choose to stay in Sichuan Province and the working regions within Sichuan Province are mainly concentrated in such cities as Chengdu, Mianyang and Deyang, etc., that have relatively developed economy. There are a small number of graduates who choose to work outside Sichuan Province and these graduates mainly flow to Chongqing and such cities as Xinjiang, Jiangxi and Guangdong, etc., that have relatively many agricultural enterprises.

It is indicated through the above analysis that, graduates are affected by the following several elements in their selection of the employment direction. The first one is the economic developmental level of the working region and the overall trend of flow of talents is flow from underdeveloped regions to developed regions. The second one is that selection of the working region by graduates, to a great extent, is dependent on the place of birth of graduates and the tendency of search for employment in cities where their graduate universities are located is also obvious. Thus, graduates should be guided to get rid of the consciousness of neighborhood, go outside to the external world and take the initiative in rising to the challenges. The third one is the development platform and development space that are provided by the employment positions. With changes of graduates in the consciousness of searching for employment, what graduates concentrate more on is fulfillment of self-value and self-achievement sense.

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