

ANALYSIS BY SECTOR OF THE EMPLOYMENT AND MANAGEMENT OF THE HUMAN RESOURCES IN THE AGRICULTURE OF BULGARIA

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Abstract: The socio-economic changes in Bulgaria in the recent years have had a significant impact on the status and development of the human resources in the agriculture. The negative trend of the decreasing employment is taken as a consequence of the structural changes which took place in the sector and the impact of the economic crisis in the country. The increase in unemployment requires the establishment and maintenance of effective work organization, ensuring optimum use of the labor potential, leading to achievement of a competitive advantage. The lack of proper management of the human capital and the low level of professional knowledge, skills and competencies, adversely affect the economic performance in key agricultural sectors. It is therefore necessary to implement a sectoral analysis of the employment and the human resources management, by presenting opportunities for their effective use and management. The purpose of this article is to analyze the employment and the human resources in key agricultural sectors, by revealing ways to achieve competitive advantage through the effective management of the human resources.

Given the particularities of the production process of the farms from different sectors, our analysis is performed separately for each of them. The distinction of the holdings by sector is based on the Eurostat classification for FSS 2007. It is assumed that the sector affiliation of the holdings shall be determined by the majority of their output /more than 60%/. For the normal functioning of any business organization, the effectiveness of its management has a very important role, which directly affects the final economic results. In turn, they carry information about the cumulative result of the skillful management activities and the efficient use of the human resources. In this regard, making a profit is seen and acts as a basic indicator value expressing the degree of efficiency of the management of the farms. The surveyed farms are grouped into two groups in order to better study the impact of the employment and management of the human resources on the economic performance. The first group gathers farms with profit. The second group includes farms which did not realize profit and accounted economic loss for the studied period. The economic result is measured by the level of the profit generated by the farms.

The lack of balance in terms of age groups, especially in the sectors with a pronounced seasonal nature and periods of intense occupational pressure, has a direct negative impact on the economic situation in the farms. It is necessary to build a complete system for optimal selection of the staff, consistent with the age groups and their qualification, in order for an optimal balance between the managerial and executive staff to be created.

Keywords: Human resource management, employment, competition, efficiency, Bulgaria

INTRODUCTION

The socio-economic changes in Bulgaria in the recent years have had a significant impact on the status and development of the human resources in the agriculture. The negative trend of the decreasing employment is taken as a consequence of the structural changes which took place in the sector and the impact of the economic crisis in the country. The increase in unemployment requires the establishment and maintenance of effective work organization, ensuring optimum use of the labor potential, leading to achievement of a competitive advantage.

The lack of proper management of the human capital and the low level of professional knowledge, skills and competencies, adversely affect the economic performance in key agricultural sectors. It is therefore necessary to implement a sectoral analysis of the employment and the human resources management, by presenting opportunities for their effective use and management.

The purpose of this article is to analyze the employment and the human resources in key agricultural sectors, by revealing ways to achieve competitive advantage through the effective management of the human resources.

MATERIAL AND METHOD

For the purposes of the research on the employment and management of the human resources in agriculture, we examined *116 different in size, status and ownership farms* operating on the territory of Bulgaria. Through a

system of indicators we analyzed the number, structure and expertise of the employees in the surveyed farms. /Tab. 1/

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Table 1. Indicators for the analysis of the employment and management of the human resources

Number, structure and experience of the employed	
1. Total employed in the farm	3. Gender
a) Of which, management staff	a) Men;
2. Age structure of the employed	b) Ladies.
a) of 15 to 35;	4. Work experience
b) of 36 to 55;	a) to 15 years
c) above 56.	b) from 16 to 35
	c) above 36

Source: Own work

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The research on the farms covers the period from September 2012 to August 2017. The averages of the five years of study serve as final data analysis. The data and information are collected through direct contacts, completing of specially designed for the purposes of the analysis reports, charts, company documentation, etc. The method of the interview is applied for further specification of the data and information.

From the studied 116 farms those which realized profit are 86.21% and 13.79% reported an economic loss for the researched period.

RESULTS AND DISCUSSION

The analysis of the total surveyed farms, which generated profit for the research period, shows that the management staff in them is 21.19% of the total number of employed, and as for the farms with loss, their share is 22.13%, /Tab. 2/. This indicator does not reveal significant differences between the two groups of farms. This demonstrates that the differences in the economic situation of the farms are due more to differences in the quality characteristics of the managers and their skills rather than to their number.

Indicators	Farm make a profit		Farm reached a loss		Deviation of losers to advancers
	number, \bar{x}	%	number, \bar{x}	%	%
1.Total employed in the farm	27,75	100	14,69	100	52,94
2.Of which, management staff	5,88	21,19	3,25	22,13	55,27
3.Age of 15 to 35	1,27	21,60	0,19	5,77	14,96
4.Age of 36 to 55	2,6	44,22	1,56	48,08	60,00
5.Aged above 56	2,01	34,18	1,5	46,15	74,63
6. Men	3,78	64,29	2,12	65,38	56,08
7. Ladies	2,1	35,71	1,13	34,62	53,81
8.Work experience to 15 years	1,44	24,49	0,63	19,23	43,75
9.Work experience from 16 to 35	2,61	44,39	1,37	42,31	52,49
10.Work experience above 36	1,83	31,12	1,25	38,46	68,31

Source: Data from own research

Table 2. Effect of the employment and management of the human resources on the agricultural farm

In terms of the age structure of the employees in the agricultural holdings, the data show that the main and particularly acute problem is *aging*. However, in the farms with profit, conditions for continuity are created. The proportion of workers aged from 15 to 35 years there is 21.60 percent, while those aged over 56, is 34.18%.

Indicators \ Groups farms	Farm make a profit		Farm reached a loss		Deviation of losers to advancers
	number, \bar{x}	%	number, \bar{x}	%	%
1.Total employed in the farm	29,15	100	13,5	100	46,31
2.Of which, management staff	6,00	20,6	3,5	25,9	58,33
3.Age of 15 to 35	1,07	18,0	0,0	0,00	0,00
4.Age of 36 to 55	2,71	45,0	1,5	42,9	55,35
5.Aged above 56	2,22	37,0	2,0	57,1	90,09
6. Men	4,22	70,4	3,0	85,7	71,09
7. Ladies	1,78	29,6	0,5	14,3	28,09
8.Work experience to 15 years	1,15	19,1	1,0	28,6	86,96
9.Work experience from 16 to 35	2,81	46,9	1,5	42,8	53,38
10.Work experience above 36	2,04	34,0	1,0	28,6	48,02

Source: Data from own research

Table 3. Impact of the employment and the human resources management in the field crop farms

In the farms which declared loss during the study period, the analysis of the data shows that nearly half of the employed in them are aged over 56. The share of the workers aged below 35, is only 5.77 %. The lack of balance in terms of the age groups, especially in production with a pronounced seasonal nature and periods of intense work pressure, has a direct negative impact on the economic situation in the farms. The shortage of young people, who to adopt and implement innovations in the industry, also by sector, leads to inefficient production and low economic performance.

The problem of the aging of the farm employees is evident in the *field crop* sector. /Tab. 3/

In the farms at profit, the employees aged over 56, are twice as many as those aged below 35. With the farms which realized loss in this sector, there is even a more negative trend. The staff aged over 56 years is more than half /57.1% and young professionals are lacking at all. This disturbance of balance and the possibility of continuity will probably affect even more negatively the future production and economic performance of these farms.

The problem of aging is equally significant in the holdings of the *field vegetable production* sector. /Tab. 4/

Table 4. Influence of the employment and the management of the human resources in the sector of field vegetable production

Indicators \ Groups farms	Farm make a profit		Farm reached a loss		Deviation of losers to advancers
	number, \bar{x}	%	number, \bar{x}	%	%
1.Total employed in the farm	20,78	100	20,0	100	96,25
2.Of which, management staff	3,89	18,7	4,5	22,5	115,68
3.Age of 15 to 35	0,56	14,3	0,25	5,6	44,64
4.Age of 36 to 55	1,89	48,6	1,5	33,3	79,36
5.Aged above 56	1,44	37,1	2,75	61,1	190,97
6. Men	2,56	65,7	2,25	50,0	87,89
7. Ladies	1,33	34,3	2,25	50,0	169,17
8.Work experience to 15 years	0,67	17,1	0,5	11,1	74,63
9.Work experience from 16 to 35	1,89	48,6	1,25	27,8	66,14
10.Work experience above 36	1,33	34,3	2,75	61,1	206,77

Source: Data from own research

The workers aged over 56 dominate in all studied farms. The problem is more pronounced in those which realized loss for the period. The survey data show that 61.1% of the staff are aged over 56, while the share of workers of the age to 35 is only 5.6%. In the farms with profit, the average number of the employees over 56 is almost three times more than the average number of those below 35.

In the *viticulture* sector exists a significant deviation in terms of the age structure in the farms which generated profit and those with negative economic results for the period /Tab. 5/.

While in the farms with positive economic results, the share of the workers aged from 15 to 35 is 23%, then in those with negative results, it is only 6.7%. At the same time, this share is five times lower than the proportion of the employees aged over 56. This indicates that in the viticulture sector, the aging is a pressing issue mostly in the farms with negative production and economical results. The reasons for these results can be sought in the lack of balance between the different age groups. This reduces the possibility of continuity between the different generations on one hand, and on the other –the innovation and vitality brought by the younger personnel.

Similar results to those of viticulture are observed with the researched *arboriculture* farms. /Tab. 6/

Table 5. Impact of the employment and management of the human resources in the viticulture sector

Indicators	Farm make a profit		Farm reached a loss		Deviation of losers to advancers
	number, \bar{x}	%	number, \bar{x}	%	
1.Total employed in the farm	33,9	100	14,6	100	43,07
2.Of which, management staff	7,93	23,4	3,0	20,6	37,83
3.Age of 15 to 35	1,83	23,0	0,2	6,7	10,93
4.Age of 36 to 55	3,55	44,8	1,8	60,0	50,70
5.Aged above 56	2,55	32,2	1,0	33,3	39,21
6. Men	4,83	60,9	2,2	73,3	45,55
7. Ladies	3,1	39,1	0,8	26,7	25,81
8.Work experience to 15 years	2,1	26,5	0,6	20,0	28,57
9.Work experience from 16 to 35	3,59	45,2	1,8	60,0	50,14
10.Work experience above 36	2,24	28,3	0,6	20,0	26,79

Source: Data from own research

Table 6. Impact of the employment and management of the human resources in the arboriculture sector

Indicators	Farm make a profit		Farm reached a loss		Deviation of losers to advancers
	number, \bar{x}	%	number, \bar{x}	%	
1.Total employed in the farm	18,69	100	11	100	58,86
2.Of which, management staff	3,96	21,2	2,4	21,8	60,61
3.Age of 15 to 35	1,04	26,2	0,2	8,3	19,23
4.Age of 36 to 55	1,50	37,9	1,4	58,4	93,33
5.Aged above 56	1,42	35,9	0,8	33,3	56,34
6. Men	2,46	62,1	1,6	66,7	65,04
7. Ladies	1,50	37,9	0,8	33,3	53,33
8.Work experience to 15 years	1,11	28,2	0,6	25,0	54,05
9.Work experience from 16 to 35	1,50	37,9	1,0	41,7	66,67
10.Work experience above 36	1,35	33,9	0,8	33,3	59,26

Source: Data from own research

Only in the *greenhouse vegetable production*, the proportion of the staff aged from 15 to 35 years is close to the proportion of the one aged over 56 years /Tab. 7/. For the period of the study, in these holdings negative economic results are not recorded. This is largely due to the established conditions for continuity among the workers in the sector. The adequate balance in the age groups is a prerequisite for the introduction of innovative techniques and technologies, the introduction of new varieties and the improvement of the selection of the existing ones.

Table 7. Impact of the employment and the management of the human resources in the greenhouse vegetable sector

Groups farms Indicators	Farm make a profit		
	number, \bar{x}	standard error, μ	%
1.Total employed in the farm	36,89	5,88	100
2.Of which, management staff	6,44	0,91	17,5
3.Age of 15 to 35	1,44	0,34	22,4
4.Age of 36 to 55	3,11	0,72	48,3
5.Aged above 56	1,89	0,20	29,3
6. Men	4,11	0,56	63,8
7. Ladies	2,33	0,58	36,2
8.Work experience to 15 years	1,89	0,35	29,3
9.Work experience from 16 to 35	2,78	0,52	43,1
10.Work experience above 36	1,78	0,32	27,6

In terms of the gender structure of the employees in the surveyed farms, there is some dominance of men over women. The data show a higher proportion of men in all sectors of agriculture. /Tables 2 to 7/. This applies equally to the farms which generated profit during the study, and to those which realized loss. Therefore, the achievement of positive production and economic situation of the agricultural holdings cannot be linked to the gender of the employees.

The length of service is an indicator of the degree of experience during the performance of the work duties and responsibilities. It can reveal details on the level of knowledge and skills acquired by the workers in their practice. In terms of this indicator, in the surveyed farms which realized profit, a ratio of the shares close to that by age groups is monitored /Tab. 2/. The highest is the proportion of the staff with professional experience from 16 to 35 years - 44.39%. Those with experience of over 36 are 31.12% and the workers with the shortest length of service of up to 15 years are 24.49%. The similar shares of the three groups show that there is a prerequisite for continuity in the transmission of the accumulated years of experience and knowledge.

In the farms which realized loss for the period, the proportion of the staff with professional experience of over 36 years /38.46%/ is relatively close to the proportion of those with experience from 16 to 35 years /42.31%/. On the other hand, the proportion of the staff with experience of up to 15 years is much smaller - 19.23%. Significantly, the length of service plays a key role only when it is connected with the quality implementation of the acquired knowledge and skills into practice. In this respect, the quantitative accumulation of years of professional activity must be combined with the development and improvement of professional knowledge and experience. Only then, the length of service of the employees in the farms can be a guarantee for a stable economic condition. The conclusions drawn so far are confirmed by the data in the individual sectors. /Tables 2 to 7/.

CONCLUSIONS

From the data presented hereby, we can draw the following important conclusions:

- One of the most pressing problems of the farms from all studied sectors is the aging of the management and executive staff. Their prioritized rejuvenation will increase the capacity to implement innovative techniques and technologies, new highly efficient plant varieties, thus turning into a precondition for achieving better economic results.
- The lack of balance in terms of age groups, especially in the sectors with a pronounced seasonal nature and periods of intense occupational pressure, has a direct negative impact on the economic situation in the

farms. It is necessary to build a complete system for optimal selection of the staff, consistent with the age groups and their qualification, in order for an optimal balance between the managerial and executive staff to be created.

- The high educational and professional training is essential to optimize employment and the effective management in the farms. The sophistication of the skills and the expansion of their knowledge and experience through additional specializations in the country and abroad should become a mandatory practice. This is a key factor for the efficient management, the optimal employment and the realization of positive production and economic results.

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