1. *Árpád FERENCZ*, 2. *Márta NÓTÁRI*, 3. *Csaba BERDE*

MANAGEMENT OF AGRARIAN EDUCATION IN HUNGARIAN

1-2. COLLEGE OF KECSKEMÉT, 6000 KECSKEMÉT ERDEI FERENC SQUARE 1-3, HUNGARY
3. UNIVERSITY OF DEBRECEN, 4032 DEBRECEN BÖSZÖRMÉNYI STREET 138, HUNGARY

ABSTRACT: The question of quality and value of human resource has been coming to the front in the Hungarian agriculture for the past few years. The aim of our essay is to represent the surveys directed to examine the problems of the qualifications of labour employed in the agriculture, and the human resource management. We carried out our survey in the framework of the research program worked out. We conducted a questionnaire-based research series among managers of agricultural companies. On the basis of the results we worked out an equivalent calculation system suitable for reviewing and comparing the different qualifications. Using the qualification equivalent as a recalculation factor, the aggregate qualification value and the qualification index of companies can be calculated. From the qualification index we carried out different examinations in order to compare and analyse the human resource management of organizations. We stated that the qualification index is below 1 in the case of 50% of the involved companies which means that the qualification of the employees in agriculture is extremely low in Hungary. We demonstrated that companies employing higher educated employees operate more effective. In the case of companies with fewer employees the qualification indexes are higher.
KEYWORDS: Hungarian agriculture, human resources management, quality

INTRODUCTION

The importance of service in economy and employment has increased, while agriculture and industry have become less dominant. As an effect of scientific results, recent scientific and technological developments and informational techniques, today's economists are talking about competence-based economy, in which human knowledge and competence, intelligence and problem-solving skills have an important role (Baglyas et al, 2011). All these changes, processes and tendencies have lead to the predominance of human resources in economy. They are equally significant, but some authors consider them even more important than money, production equipment or market influence (Reid at al., 2001). Prevost (2006) summarised the key functions of human resources as follows: human resources strategy, human resources planning, work assessment, work planning, motivation management, performance evaluation, human resources development, employment relations, personnel information system. Other authors also include healthcare and working conditions (Dienesné, 1999), organisational communication (Culkin et al., 2005). There are still others who also regard the problem of motivation (Juhász, 2004) or quality assurance (Gályász, 2001) as parts of human resources management.

METHOD OF QUALIFICATION MEASUREMENT

In order to carry out our surveys we needed a method which could make the objective measurement of the qualification of the company's employees and the comparison of the employees of different companies possible (Baglyas, 2012). No such method is known at present in the practice of human resources management. The comparison of different qualifications and the establishment of the organizational value of the certain qualifications is very difficult, since it is affected by a number of factors. We worked out the so called "qualification coefficient" method in order to solve this problem. For the elaboration of the coefficients, first of all we defined the term "qualification equivalent". The „qualification equivalent" represents the qualification as a reference base, with which the different qualifications can be correlated by recalculation factors. In our survey we defined the secondary school final examinations as the qualification equivalent. The value of this qualification in this case is 1. The ratios defined for the comparison of different qualifications are called „qualification coefficient". We carried out separate surveys for the elaboration of these coefficients. The interviewees (managers) had to rank different qualifications on a 0-3 scale with respect to their value in terms of company operation and profitability. We interviewed the top managers of 120 companies involved in agriculture, who evaluated the qualifications provided by us. We identified the

qualification coefficients (Qc) through the assessment of interviewee responses, and the proportion of the recalculation factors of the adequate qualifications became as follows:

university(MSc)Qc:2,86	*secondary grammar school Qc:1,0*	*vocational school Qc: 1.72*
college (BSc) Qc: 2.71	*secondary technical school Qc: 2.11*	*primary school Qc: 0.58*
		no qualification Qc: 0.28

Survey results revealed that the interviewees considered employees with university degrees the most valuable. It must be highlighted that managers considered not only secondary technical school education but also vocational training more valuable than secondary grammar school education, which "only" provides general kind of literacy but no technical competence. The organizational value of primary school education is slightly higher than half of the secondary school coefficient (0.58). The organizational value of employees with no qualification is very low (0.28). In order to make application of future surveys easier, we grouped the seven qualification coefficients into four categories. The ratios defined this way:

higher education (QcH)	=	*2.79*	*primary school (QcP)* =	*0.58*
secondary education (QcS)	=	*1.64*	*no qualification (QcN) =*	*0.28*

We elaborated the qualification index equation on the basis of the qualification coefficients.

$$qualification\ index = \frac{Aggregate\ qualification\ value}{total\ number\ of\ employees}$$

$$Qi = \frac{QAv}{H + S + P + N} = \frac{H*QcH + S*QcS + P*QcP + N*QcN}{H + S + P + N}$$

where: Qi = Qualification index
QAv = Aggregate qualification value
Qc = Qualification coefficient
H = number of employees with higher education
S = number of employees with secondary education
P = number of employees with primary education
N = number of employees with no education

On the basis of these qualification coefficients we calculated the qualification index of every agricultural company involved in our survey. On the basis of this we conducted surveys to gain information about the relationship between the index and the management and other parameters characterizing the various companies. In the case of the companies involved in our survey the qualification index was between 0.58 and 2.79 points. The qualification indexes of the companies are shown by figure 1, which reveals that the majority of these organizations have qualification indexes of 0.5 to 1 point.

The frequency of qualification indexes higher than 1 point is low, and the indexes highly disperse between 1 and 2.79 points. The results revealed that the qualification index of almost 50% of the companies concerned was below 1 point, which suggests a low level of qualification in the case of the employees of these companies. 38.75% of the companies had qualification indexes of 1-1.5 points. This means that the qualification index of 85.71 % of the organizations is between 0.5 and 1.5 points. Less than 15% of the companies have qualification indexes above 1.5 points. Results show that a large amount of cheap workforce with a low level of qualification is employed in agriculture.

Figure 1: The Distribution of the Qualification Indexes
Source: Own surveys

THE RESULTS OF THE QUALIFICATION INDEX SURVEYS

The qualification index made it possible to conduct surveys aimed at finding out what extent the qualification of employees affects the activities and efficiency of human resources management. Our surveys involved companies and enterprises concerned with agriculture and food industry. We grouped the companies into three categories on the basis of their qualification indexes reflecting the qualification of their employees:

✓ *Companies with a low qualification index:*   *Qi < 1*
✓ *Companies with a medium qualification index:*   *Qi= 1-1,5*
✓ *Companies with a high qualification index:*   *Qi > 1,5*

This grouping makes it possible to conduct comparative surveys to determine whether there is a difference between the human resources management practices and procedures of companies with different levels of employee qualification. We conducted our surveys with the help of management questionnaires. We applied the questionnaires elaborated in the framework of the research program. We formulated each problem as a separate question in the questionnaire. In the case of each question we provided the factors which could affect the given problem. Respondents were requested to rank all these factors from 1 to 5 with respect to the extent to which they consider these important or insignificant in the case of the given problem. One of the questions examined the way interviewees regard the expectations concerning the employees, what requirements they find important and less significant. Survey results were also assessed from another point of view: whether there is a difference between the opinions of the managers of companies with different qualification indexes. The results are shown by figure 2.

Results revealed that the assessment of all three qualification groups reflects the same tendency. This means that the "qualification" value (reflecting the professional qualification of the employees) does not significantly affect the assessment of the factors examined by our survey. Competency and independence were considered to be the most important, and were followed by qualification and practical experience in the order of importance. Thus, these factors are of secondary importance as compared to "independence" and "competency". The managers participating in the survey ranked foreign language competence and computer skills the least important factors concerning the agricultural workforce.
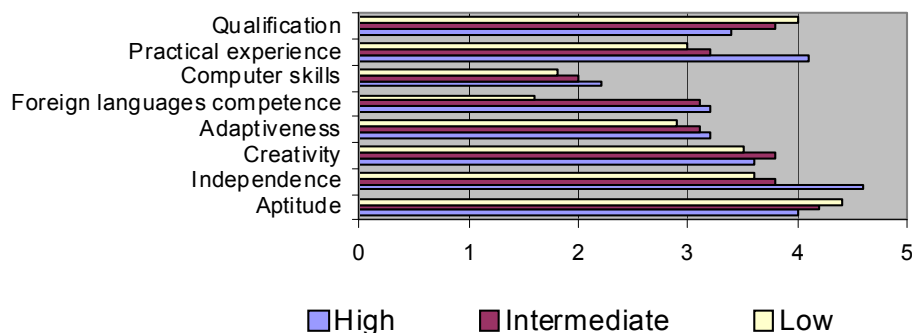
Figure 2: Examination of the Requirements Against the Employees in Companies
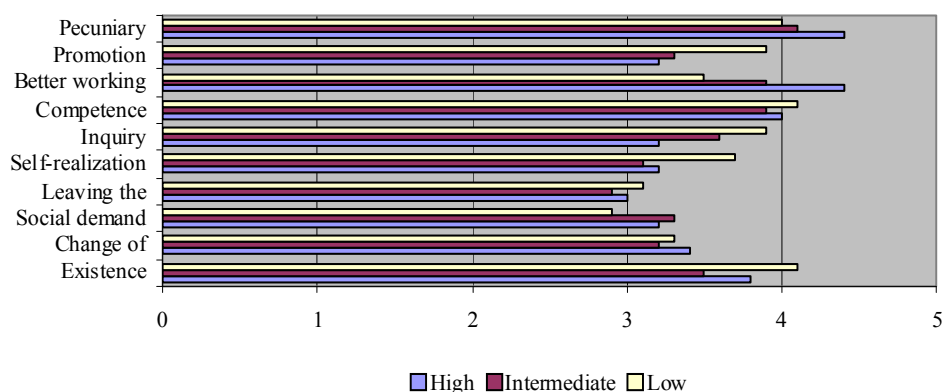*Source: Own surveys*

Figure 3: Examination of the Training Incentives of Employees in Companies
Source: Own surveys

This is also supported by the low scores as compared to the other factors. "Foreign language competence" was ranked especially low in the case of all three groups. In our survey we also tried to find the answer what kind of incentives motivated agricultural workers to retrain them. Within the frame of our survey we examined how the adjudgement of the role and importance of training incentives change in different qualification companies (figure 3).

The results of the three qualification groups show the same tendency. On the basis of the assessment of indexes, it can be stated that the most important training incentives are pecuniary incentives, better working conditions and technical competence. The results reveal that every tested factor has more than average importance in motivating employees to learn. "Social demand" and "leaving the everyday atmosphere" were rated as the less important factors. The effect of different qualification levels on forming opinion has already more explicitly emerged concerning the assessment

of the factors. The completed variance-analysis, however, has not shown significant differences. In the case of high qualification companies, besides pecuniary incentives, better working conditions also play quite an important role in training incentives. Our survey was also extended to examine what kind of connection can be found between the size, the form of operation and the qualification index of the given company. By the help of the results shown by figure 4, we found that in the case of micro-organizations with less employees, higher qualification index reflects higher expectation regarding the level of qualification.
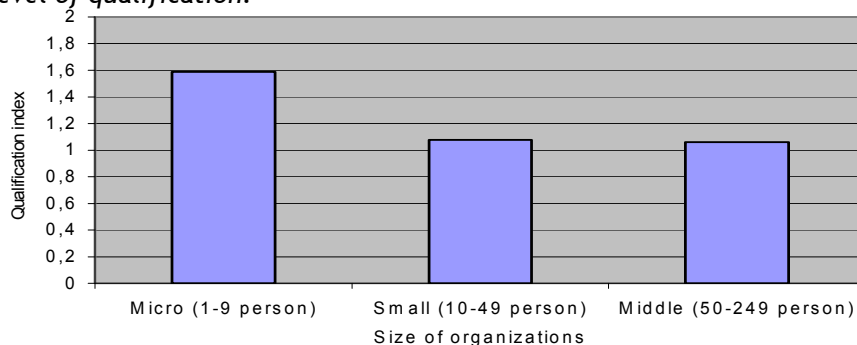
Figure 4: The Results of the Survey on the Connection between the Qualification Index and the Size of the Companies. Source: Own surveys

CONCLUSIONS

During examining the questions and problems of human resource management in agriculture, the demand of making analysis according to the qualification of employees has been arisen. The survey has claimed for such equivalent calculation method which was competent for comparing, reviewing and demonstrating of organizational value of different qualifications. In order to solve the problem we have worked out the method of so called qualification equivalent calculation. We defined the secondary school final examinations as the reference base (Qc=1) to which as a general equivalent the different qualifications can be correlated by recalculation factors. We worked the recalculation factors out based on the results of the survey taken among the top managers of agricultural organizations. By the help of these recalculation factors the aggregate qualification value of a given company can be calculated. The average of the aggregate qualification value per an employee has been called qualification index. By the help of the qualification index the different qualifications of labour of the examined organizations can be compared. Such surveys can be prosecuted by which problems and tasks of the human resource management and qualification are evaluated by the objective qualification index. As a result of the surveys carried out by the qualification index we found that the qualification index is below 1 in the case of nearly 50% of the involved companies, which means that the qualification of the employees in agriculture is low.

REFERENCES

[1] *Baglyas F.- Sugatagi G. (2011): Multivariate analysis in a wine market research in Hungary, Annals of Faculty Engineering Huneodara – International Journal of Engineering, Tome IX. Extra Fascicule. pp. 235-238.*

[2] *Baglyas F. (2012): Consumer attitudes to global grape varieties versus hungaricum varieties in the South-Alföld region, Annals of Faculty Engineering Huneodara – International Journal of Engineering, Tome X Fascicule 3. pp. 111-114.*

[3] *Culkin N. – Smith D. (2005): An Emotional Business. A Guide to Understanding the Motivation of Small Business Decision Takers. Qualitive Market Researc. Vol. 3. Num. 3., pp.145-157.*

[4] *Dienesné K.E. (2009). Emberi erőforrás menedzsment, Vider Plusz Bt., Debrecen, pp. 83-89.*

[5] *Gályász J. (2011). A minőségbiztosítás szervezeti feltételei a mezőgazdasági alapanyag-termelésben. Innováció az ezredforduló agráriumában. Gödöllő - Debrecen 211.p.*

[6] *Juhász Cs (2006): Synchronisational problems in organisational motivation in agriculture. Studies in Agricultural Economics. No. 104. 2006. pp.129-142.*

[7] *Prevost P. (2006). Environment Complexity and Professional Training in Agriculture, Turning Local Learning into Global Knowledge. Journal of Agricultural Education and Extension, Vol. 2; No.: 4; pp. 25-34.*

[8] *Reid R.R.- Adams J.S. (2001). Human Resource Management-Survey of Practices within Family and Non-Family Firms. Journal of European Industrial Traning. Vol. 25., No. 6. pp. 310-320.*

[9] *Zs. Deák (2012): Market reactions to environmental information in the food production industry. Journal of International Scientific publication Economy&Business, Bulgaria Vol. 5. Part 3. pp. 369-381.*

[10] *Zs. Deák - I-né Hajdu (2012): The role of socially responsible investing and media in the environmental stewardship of food industry companies. Acta Alimentaria Vol.41. pp. 25-39.*