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## Short communication

Hana URBANCOVA\*

# Working time organisation of senior workers in agricultural companies with a focus on age management

The current situation on European agricultural labour markets and the expected demographic development emphasise the need to address the issues of work and working time organisation in order to attract a young generation to agriculture. The aim of this paper is to evaluate the use of modern individual methods of working time organisation within agricultural companies. Data was collected through a quantitative survey consisting of 259 active agricultural companies in the Czech Republic. Results suggest that three factors were responsible for working time organisation in agricultural companies: support of flexible employment forms, employee productivity and the use of specialists. The right working time organisation of all age groups supports the cooperation of all employees and ensures knowledge continuity.

**Keywords:** age management, agricultural companies, human resource management, competence development

**JEL classifications:** J24, M54, D83

\* Institute of Agricultural Economics and Information, Department of Territorial Development of Agriculture and Rural Areas. Mánesova 1453/75, 120 00, Prague 2, Czech Republic. E-mail: urbancova.hana@uzei.cz

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## Introduction

Employees, their knowledge (explicit and tacit), experience and innovations are the most valuable assets for any company nowadays (Wikstrom *et al.*, 2018). Knowledge sharing among all generations of employees is a key aspect of age management (Urbancová and Hudáková, 2017) in companies because ageing of the population has a negative impact on the labour market and future employment in companies (Kosir and Soba, 2016), primarily so in agriculture. With regard to the competitive environment and high costs incurred by organisations in relation to creating new jobs and adapting to the requirements of employees, a continuous emphasis on their education and development is needed (Lambert, 2018; Bjerke, 2016). It is necessary for farms and agricultural companies to focus on the organisation of working time (Askenazy, 2013), including flexible forms of employment as well as flexible forms of working time organisation (Stirple *et al.*, 2018; Urbancová and Navrátilová, 2016).

Besides posing serious social challenges, changes in the age structure of the population should also be analysed from an age management perspective: how to organise the working time and work conditions of the elder generations for the company to be more efficient? The management of age diversity of employees is also essential for knowledge continuity management (Urbancová and Hudáková, 2017) as well as it helps to keep agricultural values, objectives, past management decisions and future intentions in agricultural companies (Brown *et al.*, 2019).

In the Czech Republic, the agricultural sector is characterised by a less favourable age structure when compared to the national economy. The age 50+ generation is significantly over-represented in agriculture, causing labour markets to be rigid, inflexible and unproductive (Wikstrom *et al.* 2018, Kosir and Soba, 2016).

At the same time, the Regional Economic Strategy of Europe suggests that the percentage of part-time employment contracts in Europe will increase faster than the number of full-time employment contracts (increase approx. by 2 %). Therefore, the agricultural labour market environment must apply new trends in human resources activities that will help to maintain the knowledge base in agriculture companies thanks to inter-generational cooperation of employees. This can either be achieved through suitable working time organisation or through proper age management.

Based on the above, the aim of the paper is to evaluate the use of modern methods of working time organisation within agricultural companies in the Czech Republic.

## Literature review

Nowadays, there exists many flexible forms of employment, including shorter working times, overtime work, uneven work schedule, flexible working times, job rotation, job sharing, temporary career interruption, company scholarships and purchased leave, flexitime or freelancing (hiring specialists for short-term cooperation as private service providers). However, it is important to note that the use of individual forms of working time organisation and employment depends on the organisational conditions, personal characteristics and the nature of work (Ilmarinen, 2011). As confirmed by many studies (Galea *et al.*, 2014; Askenazy, 2013; Mohrenweiser and Zwick, 2009), the agricultural sector is no exception in this regard. Although the use of flexible working time organisation is also influenced by the type of a job, a wide range of flexible working time organisations makes it possible to use them in agriculture, especially for different age groups (Principi and Fabbietti, 2015; Ciutiene and Railaite, 2015; Froehlich *et al.*, 2015; Urbancová and Hudáková, 2017).

A higher involvement of specific groups of employees (i.e. individuals around retirement age, students, young mothers with children) in the labour market in the Czech Republic is especially hindered by the insufficient offering of part-time employment opportunities. The Czech employees aged 45+ in agriculture (including hunting and forestry) represented 52.7% of the workforce in 2016, whereas in the national economy it was 42.4 %. In agriculture, the 45-59 age group represented 40.8% of the workforce, whereas in the national economy it was 34.7%. Regarding the oldest age group (aged 60+), agriculture also employed more of such workers (11.6 %) than the national economy (7.7 %). The proportion of the eldest generation has been growing moderately recently, caused not only by retirement age growth but also by the transition from the numerous age group of 45-59.

It should also be noted that employees aged 50+ need specific working conditions. They have specific physical strains, less motivation and different personal goals. According to the literature (Lorga and Dobre, 2018; Urbancová and Navrátilová, 2016; Moshchenko *et al.*, 2018), the main indicators affecting age and working time management in Czech agricultural companies are the size of the company (number of employees), the level of training of the company management, the age of the head of the company, the family structure of a firm and the ownership of agricultural companies (domestic or foreign).

Searching for the tools to enhance motivation/stimulation is particularly important these days as the unemployment in the Czech Republic declined in 2017 to its lowest level for the past 19 years and showed the lowest rate in EU-28. Thus, the Czech Republic is probably at its natural unemployment rate and the problem of its economy is not unemployment but a lack of workforce. The lack of qualified employees is already clearly visible in agriculture.

As evident from the above, the current situation in the Czech agricultural labour market is unfavourable in many respects. The lack of young farmer generations and the lack of skilled workforce lead to the need of farm managers to use flexible working time organisation and management. Despite the importance of the topic, a relatively low number of research has been dedicated to the scientific analysis of age and working time management in the Czech agriculture, especially regarding senior workers – a gap to be filled by this paper.

## Data and method

In order to determine how working time organisation is used in agricultural companies in the Czech Republic, a questionnaire consisting of 23 questions on age management and 7 identification questions was used. The questionnaire was divided into four parts (conditions of age management application; benefits and limits of age management application, costs of age management, use of working time organisation and knowledge continuity) and this paper concentrates on the “use of working time organisation and knowledge continuity”.

Primary data was gathered by using online questionnaires. The research was conducted in 2017 by quota-based

**Table 1:** The share and number of senior workers in the sample.

Share of senior workers	Number of companies
0-5%	69
6-10%	44
11-15%	35
16-20%	38
21-30%	36
31-40%	15
41-50%	13
51-100%	9
Total	259

Source: own composition

selection among agricultural companies active in the Czech Republic (n=259). In total, 860 e-mails to owners or management of agricultural companies were sent out, out of which 259 were returned, resulting in a response rate of 30.11%. The sample was based on the Albertina database of organisations. Albertina is a unique database that contains important data of more than 2,700,000 organisations registered in the Czech Republic. The questionnaire was completed by middle or higher management of the addressed companies and in the case of smaller companies, by the owner itself. Half of the respondents worked for small companies (49.8% were from companies with 1–49 employees), a quarter for medium-sized companies (26.3% were from companies with 50–249 employees) and another quarter worked for large companies (23.9% were associated with companies with 250 employees or more). The vast majority of the companies (84.2%) were under Czech ownership, while 15.8% of the companies were owned by foreigners. Table 1 shows the share of senior employees (50+) in the 259 companies.

First, descriptive statistics were used to evaluate the results. As a second step, factor analysis was run and as recommended by Anderson (2013), the Varimax method and the Kaiser-Guttman rule (i.e. the dispersion value of substantial factors is higher than 1) were used to select the most important factors. Values above 0.3 (Anderson, 2013) are considered as key values in social science, and primarily in the HR management. In our case, factor analysis was used to identify factors that put behaviour of respondents (owners/managers of the agricultural company) into meaningful groups. The statistical software IBM SPSS Statistics 24 was used to evaluate the results.

## Results and discussion

As evident from Table 2, two thirds of agricultural companies in the Czech Republic used part-time and flexitime forms of employment in agriculture. Teleworking was also relatively popular, while the use of other forms like company scholarships or purchased leave was limited.

It is also observable from our sample that agricultural companies in the Czech Republic used flexible working forms mostly for younger employees and for women with children and less for the 50+ age group. However, better use of flexible forms of employment would allow employers to better adapt to workforce demand fluctuations and demographic changes, increase employee loyalty, save costs,

**Table 2:** Working time organisation in the 50+ age group.

Working time organisation/form of employment	Number of companies	Share (%)
<b>Flexitime</b> The employees choose the beginning and/or the end of their working time by themselves, they are present at their working place during the working hours fixed by the employer and work fixed number of hours per day, week or month.	39	20.2
<b>Part-time employment</b> The employer and employee agree upon a working time shorter than a fixed 40-hour working time per week, in the employment contract.	39	20.2
<b>Special part-time</b> Agreement to complete a job and agreement to perform work under Sec. 75/Sec. 76 of the Czech Labour Code (20 hours/week, small-scale employment up to CZK 2000)	50	25.9
<b>Job sharing</b> One job is shared by two people: they work part-time in mutual synergy.	5	2.6
<b>Teleworking, home working</b> An employee carries out his/her tasks from distant location through the use of phone, e-mail, Skype, ICQ and similar contemporary communication technologies. The tasks can also be performed at home (home working).	18	9.3
<b>Compressed work week</b> Uneven distribution of working time = an employee makes up full 40 hours-per-week in less than five days. Work days are longer, but a work week is shorter. The employee earns one extra free day in a week.	5	2.6
<b>Temporary career interruption</b> An employer may grant unpaid leave for a certain period, which may be used by the employee, e.g. for study, traineeship abroad.	10	5.2
<b>Company scholarship</b> (for studying employees)	0	0.0
<b>Purchased leave</b> This option is for the employees who need extra leave weeks: they “purchase” the extra time – with their monthly salary proportionally reduced. Such leave is not handled by laws; it is upon agreement of both parties.	2	1.0
<b>Flexitime work year</b> An equivalent to flexitime, related to calendar year. During such year, an employee works more in certain months (overtime) and less in other months (he/she takes compensatory leave).	12	6.3
<b>Freelancing</b> Hiring specialists for short-term cooperation as private service providers.	13	6.7
<b>Total</b>	193	100

Note: The respondents can state more answers. If organizations do not allow flexible forms in selected agricultural companies, respondents did not respond.

Source: own composition

**Table 3:** Company classification based on working time organisation.

Variables	Flexible work-minded	Productivity-minded	Specialist-minded
Flexitime	<b>0.705</b>	0.233	0.059
Short-time employment	<b>0.746</b>	0.190	0.089
Part-time employment	<b>0.602</b>	0.323	-0.212
Job sharing	0.154	<b>0.681</b>	-0.048
Teleworking, homeworking	<b>0.736</b>	-0.144	0.052
Compressed work week	0.133	0.504	<b>0.582</b>
Temporary career interruption	<b>0.512</b>	0.085	0.157
Company scholarships	-0.058	0.052	<b>0.811</b>
Purchased leave	0.023	<b>0.671</b>	-0.001
Flexitime work year	0.234	<b>0.522</b>	0.322
Freelancing	0.420	-0.326	<b>0.559</b>
Variance explained	27.330%	12.985%	12.097%

Source: own survey

recruit or dismiss an employee more quickly in reaction to changing market situations and create a better company brand.

The results were further processed by using Varimax-based factor analysis (Table 3). This technique has identified three important types of companies, explaining 52% of the total variance of the sample: flexible work-minded, productivity-minded and specialist-minded companies.

As to flexible-minded companies, it is evident they support flexible working time, short-and part-time employment, teleworking and temporary career interruption. Values of

coefficients vary from 0.5 to 0.7 which can be considered significant and it is traditional agricultural family farms (companies) who chose these forms of working time organisation.

The second factor is created from job sharing, purchased leave and flexitime work year with relatively high coefficients. This factor can be named “Productivity-minded”, referring to the fact that such agricultural companies in the Czech Republic focus rather on the stable productivity of their employees. On the contrary, the third type of companies consists of “Specialist-minded” organisations preferring



compressed work weeks, freelancing and company scholarships, working with higher rates of highly specialised work. Although it seems that traditional forms of working time organisation in agriculture are still most often used, some signs appear that companies also use less frequent forms of working time organisation, which are highly needed, especially in agriculture.

Results are mainly in line with the literature. The importance of age management for all age groups, regardless of the sector, is documented by Principi *et al.* (2015) and Riva *et al.* (2014). It is, therefore, necessary to focus on the examined issue of age management also in agricultural companies. Results have shown the necessity for the addressed companies to support flexible working arrangements, employee productivity and the use of specialists, which is in accordance with Angeloni and Brogonovi (2016) and Ciutiené and Railaitė (2015). Age management in agriculture can also help to ensure the knowledge continuity process and to effectively use the internal and external knowledge to increase the performance of agriculture organisations, which is confirmed by the research of Bjerke (2016). Increasing the agricultural managers' knowledge by educating them can increase labour productivity, which is confirmed by Nowak and Kijek (2016).

In order to eliminate the negative consequences of a rigid labour market, ageism, non-used working time and insufficient knowledge continuity, agricultural companies can use the Hogan Development Survey (HDS). This survey focuses on assessing potential obstacles to personal and professional development of each employee, helps identifying the motives and values of an individual in achieving goals in its personal and work life as well as tests personality features in their interpersonal relations and personal lives and thus affect their work performance.

Moreover, poor health is probably the main reason why the employees leave the company and labour market before they reach the official retirement age (Collien *et al.*, 2016; Riva *et al.*, 2014; Štorová, 2012). However, timely intervention in terms of re-organisation of working procedures, using flexible working time and improving lifestyle may lower the probability of early retirement. Medical guidance can also help those with lowered physical performance above 50 to improve their labour market situation. Moreover, according to McKinsey & Company (2019), positive work-life balance policies, resulting from company culture, increase work performance of 50+ employees and enhance their productivity and competitiveness.

## Conclusions

This paper analysed the level and structure of working time organisation in Czech agricultural companies, especially considering employees above 50 ages. Results suggest that the majority of Czech agricultural companies uses traditional forms of working time organisation in agriculture, though some signs appear that companies also use less frequent forms of working time organisation, which are highly needed, especially in agriculture. By using factor analysis, the paper has identified three important types of Czech agri-

cultural companies in terms of age management: flexible work-minded, productivity-minded and specialist-minded companies.

Given the above, it can be summarised that it is precisely the use of flexible forms of working time organisation and flexible forms of employment, which is an important part of age management. The limitation of the research lies in the sample and method characteristics. Future research might focus on other countries and sectors as well as the determinants and impacts of proper age management.

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