




## Article

# Draft Methodology of the Age Management Implementation in Human Resource Management in a Transport Company

Martina Hlatká <sup>1</sup>, Ondrej Stopka <sup>1,\*</sup>, Ladislav Bartuška <sup>1</sup>, Mária Stopková <sup>1</sup>, Daniela N. Yordanova <sup>2</sup>, Patrik Gross <sup>1</sup> and Petr Sádlo <sup>3</sup>

<sup>1</sup> Department of Transport and Logistics, Institute of Technology and Business in České Budejovice, Faculty of Technology, Okružní 517/10, 370 01 České Budejovice, Czech Republic; hlatka@mail.vstecb.cz (M.H.); bartuska@mail.vstecb.cz (L.B.); stopkova@mail.vstecb.cz (M.S.); gross@mail.vstecb.cz (P.G.)

<sup>2</sup> Faculty of Business and Management, University of Ruse, Studentska Str. 8, 7017 Ruse, Bulgaria; dyordanova@uni-ruse.bg

<sup>3</sup> Institute of Technology and Business in České Budejovice, Faculty of Corporate Strategy, Centre of Language Services, Okružní 517/10, 370 01 České Budejovice, Czech Republic; petsadlo@mail.vstecb.cz

\* Correspondence: stopka@mail.vstecb.cz



**Citation:** Hlatká, Martina, Ondrej Stopka, Ladislav Bartuška, Mária Stopková, Daniela N. Yordanova, Patrik Gross, and Petr Sádlo. 2021. Draft Methodology of the Age Management Implementation in Human Resource Management in a Transport Company. *Journal of Risk and Financial Management* 14: 183. <https://doi.org/10.3390/jrfm14040183>

Academic Editor: Cristina Raluca Gh. Popescu

Received: 16 March 2021

Accepted: 15 April 2021

Published: 17 April 2021

**Publisher's Note:** MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



**Copyright:** © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

**Abstract:** At present, companies should definitely be able to adapt to their environment. It entails being able to successfully predict and eliminate flaws and undesirable steps which may result in negative consequences. It can only be executed by careful consideration of three basic enterprise's components which comprise the following: material resources, financial resources and human resources. An effective corporate coordination and human resource management is a cornerstone of the enterprise's success while these components are of the same importance to this success. To this end, the aim of this manuscript is to design innovative recruitment procedures when using age management approach for a specific transport company; in particular, its human resource management is taken into consideration. In the initial parts of the manuscript, an analysis of quantitative and qualitative data is performed, wherein introduction into the addressed subject, relevant literature review, as well as description of utilized data and methods within the conducted research are elaborated. Consequently, in a case study section, the Work Ability Index (WAI) method is used to focus on the chosen group of employees in order to profoundly investigate their work abilities. The very examination of employees' life cycle encompasses multiple age categories and measures a decrease in their work ability level. As for the ensuing (final) parts of the manuscript, a thorough evaluation of results obtained, appropriate discussion and, last but not least, conclusion section are compiled, in which the most imperative findings of the performed investigation are comprehensively summarized. Following the above, the purpose of this study is to compile a novel methodological procedure in terms of using the principles of age management in human resource management; specifically, in an opted transport company, and thus helping towards more effective and sustainable corporate recruitment strategy.

**Keywords:** human resources management; age management; transport company management; Work Ability Index

## 1. Introduction

Globalization has become a worldwide phenomenon. The term refers to interdependent processes which mutually face economic, technological, social, cultural and political global challenges. The modern age predominantly focuses digital and automation development. Worldwide trends indicate substantial changes in all spheres. If we look into human resource management, it is apparent that this sphere has not resisted enormous alterations (Egdell et al. 2020). The sector at issue has recently been turning away from its original strategy and is nowadays more oriented on individuals which means that also the sphere of human resources must comply with requirements posed by modernity and Industry 4.0

(Kampf et al. 2017); the management of the present century emphasizes initiative, creativity and keen interest in a specific thing. Bureaucratic administration has been completely replaced with spontaneous coordination (Urbancová et al. 2020). The whole recruitment procedure deals with several important subagendas. Decisions are made on collective awareness; furthermore, employees' motivation no longer emphasizes only external factors, but internal aspects also play an important role. The performance of individual companies depends on various factors. These comprise, e.g., (Mathis et al. 2016; Tonelli et al. 2020):

- position on the market,
- sector in which a specific company operates,
- geographical location,
- or quality of human resource management.

Additionally, it is namely the quality of human resources that nowadays poses enormous challenges (Azhdari et al. 2019).

The whole society has been undergoing dramatic changes which also influence the management in question. This issue includes without limitations demographic influences, low birth-rate and dramatic transformations in the age structure of the population. Aging population may have significant social and economic impacts on the whole society. The productive age of people will probably last longer, with no prospect of the timely retirement (Azhdari et al. 2019). Manufacturing and nonmanufacturing companies should thereby address this crucial issue and find employment for people throughout all age groups; i.e., reaping benefit from a different age line-up of the working team (Pak et al. 2019). Individual workers go through a specific lifecycle; as depicted in Figure 1.



**Figure 1.** Worker's lifecycle. Source: (Mathis et al. 2016).

To 19 years, individuals are economically dependent either on parents, or social benefits. The economically active group includes citizens from 20–64 years, followed by the elderly, after reaching the age of 65, which must be classified into the economically dependent group. At the beginning of the productive life, individuals adapt to a process which starts from a successful recruitment of employees and getting familiar with the work life. Throughout the work life, an individual is subject to several changes in work duties (Grah et al. 2019). He/she starts to plan a career and get to know him/herself. After some time, worker's social habits undergo dramatic changes such as starting and raising a family. After this phase, another crossroad in the workflow emerges—a personal development and risk of unemployment together with the round-the-clock care and support of the family. The final stage is usually characterized by oncoming retirement from the labor market, which may be caused either by company's strategy, or worker's individual plan (Kröll et al. 2017; Smrekar et al. 2019; Verheyen et al. 2016).

## 2. Literature Review

Age inequality is becoming a particular problem for companies undergoing new pension reforms. The identification of limitations and the determination of factors for favorable age management in small and medium-sized enterprises were addressed in particular by Loos-Baroin (2006). The subjective importance of age, which allows for different perception of older workers in different sectors, was addressed, for instance, in the research (Dujardin et al. 2014). Hennekam (2016) focuses on the performance of older workers interconnected to internal and external career focus. Brillet and Gavaille (2014) closely followed the previous research with their new challenges and issues. On the other hand, Joniaková and Blštáková (2015) as well as Lacaze (2014) deal with the implementation of possible synergies among generations and the exchange of knowledge between people at

the end of the age continuum. The area of their expertise is to aim at the potential of young people as well as the role of aging employees. As far as human resource costs are concerned, this particular subject as well as benefits relying on aggregate national human resources benchmarking data applied to older workers is examined in the literature (Brooke 2003). The study is based on the ratio of duration of employment of older workers compared to younger workers and utilizes this ratio as a multiplier of human resource costs.

The subject of human resource management per se has been presented in numerous literary sources. For instance, as for road transport sector, Sukalova (2020) analyzes the legislative impact on human resource management in road freight transport and identifies a series of current issues relating to the workforce. Thereunto, even the article (Nor et al. 2020) tackles a specific case study in association with road transport, wherein the impact of human resource management practices on the employee commitment at road transport department in the state of Perak, Malaysia is investigated.

In addition to the previous publications, whilst Petersson (2018) deals with the role of human resources in the corporate strategy of a particular shipping company located in the United Kingdom, the paper (Batarlienė et al. 2017) emphasizes the importance of Lithuanian transport sector enterprises functioning in research processes of human resource management. Moreover, the manuscript (Chalikias et al. 2014) describes the determining attributes of employees' recruitment and a choice of human resources in the elaborated literature review as well as processed case study focused on an innovative-based pharmaceutical company.

In regard to the very concept of Work Ability Index (hereinafter referred to as WAI) implemented in transport sector conditions, several publications have been elaborated as well. For example, Kloimüller et al. (2000) examine the relation among subjective stress factors and symptoms, WAI and age attributes. The objective of their research is to evaluate whether subjective stress-inducing sources and symptoms correlate more with WAI or age factors, whereby the sample of respondents comprises bus drivers from a public transport system. Similarly to the previous one, even the article (Sampaio et al. 2009) highlights work ability profile and aspects affecting it in a specific bus transportation company in Belo Horizonte, Brazil. The applied methods of investigation encompass a sociodemographic and occupational questionnaire, WAI and Job Stress Scale. On the other hand, Karazman et al. (1999) and Ilmarinen et al. (1997) assess individual changes and differences in work ability and work interest by using the WAI approach. As for the first authors, during the 20-days-long health promotion program, drivers of the Munich Transport Authority of an average age of 50 years participated in and underwent such an experimental survey. Regarding the second study, changes in the work ability of active employees over a period of 11 years were monitored. Specifically, men and women in the same occupation evaluated their work ability by using WAI instrument when considering physical and mental work demands, diagnosed diseases, work ability prognosis, sickness absence, work impairment from disease, as well as psychological resources.

Although multiple authors have discussed the topics of age management, human resource management or Work Ability Index, none of them have ever outlined an analogous combination of these aspects when utilizing similar data sets and by applying to the same operation (sector), as we did.

### 3. Data and Methods

This paper involves a questionnaire survey to obtain relevant data for the research. Respondents had a choice when answering, but also space for their own expression. Based on this data, individual activities for the implementation of age management were targeted. As aforementioned, the method of Work Ability Index (WAI) was used for the research purposes, which is focused on selected employees of different age categories to examine their work abilities (Ilmarinen 2009). The evaluation of an employee's life cycle includes individual age groups and measures the decrease in the values of work ability. The method can be applied to individuals or even entire groups of workers. It can be combined for individual departments if it is a larger company. From the resulting analysis, it is also

necessary to implement measures that will support a healthy working life of the company's employees (Rašticová 2013).

Relevant research for the purposes of compiling the manuscript took place over the specific period from 1 November 2018 to 31 October 2019 and all the employees of the examined transport company were included in the very questionnaire survey. As mentioned above, WAI was applied over the same time period to chosen employees of different age categories (see distribution below). This index was based on several partial evaluations; i.e., current ability, work ability in relation to physical and mental demands for work, reported diagnosed diseases, estimated damage to health condition, incapacity for work in the last 12 months, own prognosis of work ability in the next 2 years and mental resources of the investigated employee. WAI measured in such a way ranges from 7 to 49 points and four separate categories were designed to describe WAI value levels:

• First category	"bad"	range 7–27
• Second category	"mid"	range 28–36
• Third category	"good"	range 37–43
• Fourth category	"excellent"	range 44–49

Assignment of employees into age categories was performed once upon entering the very research. Subsequently, such age groups were fixed and thus further research was time-independent.

#### 4. Implementing Age Management into a Transport Company: A Case Study

It is namely specific phases of the work life from which companies may considerably benefit. The fourth phase presents the critical phase for all the organizations; i.e., workers attain the mature age of their life, which also means an uneven or slowing work pace while the risk of unemployment is significantly higher than at the beginning of the work cycle. However, a lot of methods of dealing with the issue of human resource management have recently been devised (Brooke 2003), (Rašticová et al. 2019). If we want to focus on this issue, the method of age management is highly applicable. The cornerstone of this conception is to achieve harmony between worker's individual capacity and requirements for the job he/she is doing. This idea considers all phases the individuals go through at a workplace, heavily focusing on the age of the worker and covering the whole area of his/her work life (Fisher et al. 2017). Age management tries to enhance employers' understanding relating to the family life of their subordinates and allows them to more rationally plan their whole work life. This concept builds on maintaining a long-term working ability throughout the work cycle. The motto for age management is recognizing the working capacity which can be understood as health, abilities, education, knowledge and skills of a worker in his/her working environment (Johnson et al. 2017). Age management can be defined as the human resource management respecting the age, abilities and potential of workers and is classified into three categories (Joniaková and Blštáková 2015):

- individual,
- organizational,
- social.

The social category includes without limitations ageing of the population which at the same time presents a crucial issue of the social aspect. In this category, individual states try to implement age management into separate companies which reflects the state employment policy and labor market stability (Urbancova 2019).

The organizational category tackles the issue of organization when most of the modern companies face a fast turnover and ageing of the workforce. Thanks to the change in the approach towards staffing, this long-term job changing can partially be reduced by finding a better use of the labor pool.

The individual category concerns individual employees trying to hold down a job using different methods. An individual is influenced not only by innate factors, but also by developed skills (Pranjic et al. 2019).

The current labor market, as has already been mentioned, touches on various issues including without limitations fast labor turnover and diversified population. As a result of this marked inflow and outflow of workers, enterprises incur not only time, but also financial costs relating to the education of new workers. There is no place for new projects since the training and adaptation of workers to the working environment takes its time (Freyer et al. 2019). Another problem is that there are only few people on the labor market and a profound lack of experts. Job vacancies are usually filled with unsuitable applicants; i.e., current workers are overloaded which results in underperformance of both—the workforce and the whole organization. A lack of qualified workers causes orders to be either cancelled, or not received at all. Bad cooperation with offices and other institutions poses another big problem. If a company fails to find qualified workers on the national market, it has to look abroad. Complex legislation and poor communication consume a great deal of time to recruit a worker. The age management implementation brings considerable benefits which could resolve these issues (Cheng et al. 2020), (Feißel et al. 2018). The most enormous advantages are as follows (Feißel et al. 2018):

- increasing the competitiveness on the market,
- increasing the quality and stability of human resources,
- reducing costs,
- greater satisfaction of workers in a specific company,
- experienced workers pool skills with young employees.

#### 4.1. Quantitative Research

This research was carried out in a specific transport company which can be classified as a modern and profit-making enterprise in the Czech Republic which has been operating on the market for more than 60 years and currently operates also on foreign markets. The area of transport includes company's workforce, marketing, accounting, investment projects, information systems, transport and shipping. To the month of March 2021, the enterprise employed 224 workers in total, out of which 199 are men and 25 are women, which is 89% and 11%, respectively. Nonetheless, the survey itself involved only 25 randomly chosen workers, out of which 20 are men and five are women, which is 80% and 20%, respectively. Thus, 25 out of 224 represent a relatively small number of sampling respondents, however, for the purpose of the study per se as well as application of WAI, this value is sufficient and appropriate.

The investigated employees were subsequently divided into five age categories which are depicted in Figure 2.

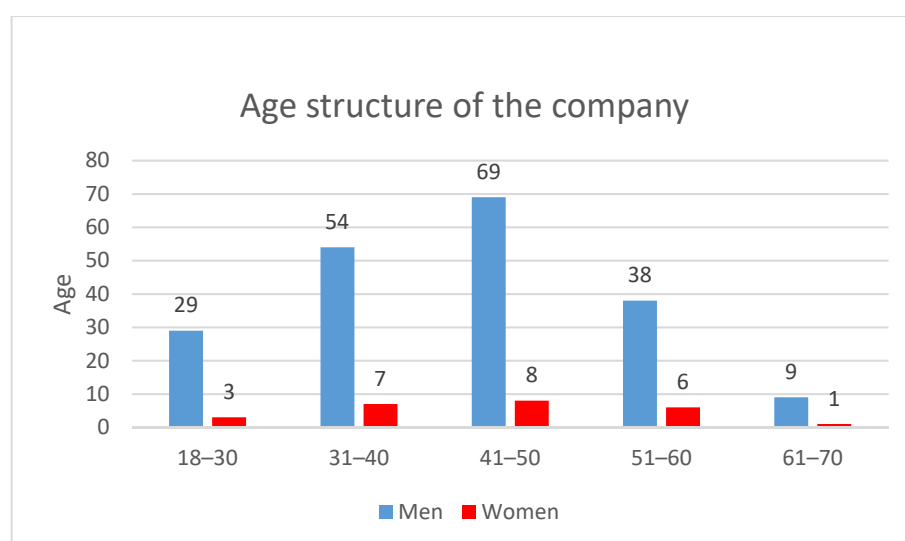


Figure 2. Illustration of the company age structure. Source: authors.



The chart above suggests that most workers are between 41 and 50 years (69 men and eight women in particular) followed by the category of 31–40 years, which is represented by 54 men and seven women. What must not be omitted either is the group of 51–60 years, which raises the issue of ageing, represented by 38 men and six women. The smaller numbers of lower age employees may cause serious problems in the future regarding the age distribution of the workforce, considering the inevitable retirement of older colleagues. Young people do not apply for job vacancies and if somebody does, he/she will not last there long. Although the labor turnover is extremely high, the company has adopted a neutral attitude towards the current situation. No preferential treatment has been given to either category. The corporate management tries to offer its workers specific fringe benefits (Cheng et al. 2020). All these benefits embrace the following (Kyriakopoulos 2012):

- meal vouchers,
- monthly contributions to additional pension or life insurance scheme,
- bonus in the form of 13th salary which equals to half of the regular salary,
- monthly remunerations for no absenteeism,
- company events,
- cultural and sport events,
- extra week of holiday,
- vitamin vouchers,
- recruitment contributions.

The company has recently been facing a long-term lack of workforce. To this end, it offers recruitment contributions to attract potential applicants. The perennial problem lies in a long-term lack of the workforce together with the rapid turnover of current workers. To tackle these issues, an analysis relating to workers' education was carried out, showing that most workers completed their education by passing apprenticeship exams. In most cases, the survey involved senior workers or technical and economic specialists with secondary or university education. During their professional career, contracting workers are further educated only through seminar and training courses conducted by the company. Other forms of workers' further education have yet to be applied. The analysis is suggested in Table 1. The article aims to find a suitable position for workers in their advanced working age within the specific company and come up with principal recommendations. The corporation is strongly customer-oriented and always targets to the highest-quality services. The company has also built up harmonious relationships with its customers and has been trying to hold a dominant position on the market.

**Table 1.** Education of workers in the company.

Education	Number of Employees (pcs)	Number of Employees (%)
Basic	26	11.61
Vocational	130	58.04
Secondary	59	26.34
University	9	4.01
Total	224	100

Source: authors.

Age management has not been applied in the examined company yet. To implement it, qualitative and quantitative research needed to be conducted first. Quantitative research was carried out by a survey in order to investigate employees depending on their age and subsequently divide them into several age categories (see manuscript Section 4.1), whereas the qualitative research was conducted by structured interviews with chosen employees; see details in the ensuing manuscript Section 4.2.

#### 4.2. Qualitative Research—Application of Work Ability Index

As far as the qualitative research goes, to expound a forthright view and complement data, semistructured interviews were held with chosen employees out of the ranks of

ordinary workers, foremen, technical and economic workers as well as top corporate managers. The interviews were conducted in compliance with rules stipulated by a human resources officer, lasted approx. 30 min and were based on an area of eight specific pillars. The research aims at gaining necessary information about what workers think about their current job, their preferences and needs. These needs were included in various kinds of questionnaires. The first of them was responded by all 224 employees of the company. The questionnaire focuses on eight basic pillars of age management as follows (Joníaková and Blšťáková 2015):

- 1st pillar—knowledge of the issue of age: How long have you been employed in the company and what is the situation in your family? How high is the staff turnover in your company? How long does it take to train new employees for positions that are left due to retirement? What is the age structure in your company?
- 2nd pillar—positive attitude towards age: Are you happy with conditions at the workplace? How do employees treat younger and aging employees? Does the corporate culture take into account all the generations in the workplace?
- 3rd pillar—management focused on the individuality and differences: What is the most important for you? How does the corporate management take into account the individual needs of employees? Does the company handle employee diversity in the context of globalization, age and gender diversity?
- 4th pillar—the age strategy focused on effectiveness and quality: Would you ever use an alternative if offered by the employer? Do managers take into account different age categories of workers? Are these people treated equally in the company?
- 5th pillar—good work ability: Are you interested in further education and development? What is the working ability of employees in different age groups? What activities does the company apply in order to maintain work ability? How long does it take for an employee to be exhausted?
- 6th pillar—high level of competences: Do you have an opportunity to professionally develop? Is the company aware of the importance of lifelong learning? Do older workers have the same access to education as younger workers?
- 7th pillar—focusing on an effective organization of work and working environment: Which fringe benefits are you most interested in? What is the influence of individual aspects on your work performance? Are the assumptions and needs of employees of different ages taken into consideration in the company when organizing work? How are the health and functional capacities of older workers taken into account when organizing work?
- 8th pillar—happy life: How do you evaluate your working condition? Do you think that the company takes employee's age into serious consideration? Is it possible to get a job position in the company that takes into account the possibilities of older workers? Does the company support employees with appropriate instruments during the last years before retirement?

The qualitative questionnaire was then complemented with another survey focused on assessing the work ability of employees by WAI method (Nasution and Erwin 2019). Apparently, ageing of employees brings factors that reduce work effectiveness, including without limitations reduction of the physical capacity, weakening of bodily and mental functions, higher sickness rate, etc. The research provides information necessary to maintain required or the best possible work ability of employees. Other questionnaires examined physical, mental and health disposition of specific workers. These were compiled in collaboration with the physician who provides the health and preventive care for the specific company under strict conditions not to disclose personal data of the examined persons. The research was heavily focused on the work ability compared to the most productive life cycle; i.e., number of sicknesses, length and amount of sick leave throughout the last 12 months, the prognosis predicted by the specific worker (Mamcarz et al. 2019). The received value of WAI was compared to the reference value which represents an average value of the work ability of men and women of the same age while performing the same job

(Hitka et al. 2018). The findings showed that Work Ability Index indicates average values. Thereby, it is imperative to increase the work ability.

The survey covered 25 randomly chosen workers. Tables 2 and 3 summarize the abridged version of WAI involving 20 men and five women of all age categories. To avoid research bias, the company physician picked at random individual respondents.

**Table 2.** Values obtained upon applying Work Ability Index.

Gender	Year of Birth	Age	WAI	Current Condition	Future Condition
Male	1982	37	44	Excellent	Maintain
Male	1978	41	43	Fair	Encourage
Male	1976	43	39	Fair	Encourage
Male	1991	28	47	Excellent	Maintain
Male	1983	36	48	Excellent	Maintain
Male	1978	41	46	Excellent	Maintain
Male	1973	46	43	Fair	Encourage
Male	1969	50	39	Fair	Encourage
Male	1968	51	41	Fair	Encourage
Male	1976	43	45	Excellent	Maintain
Male	1958	61	29	Poor	Increase
Male	1972	47	44	Excellent	Maintain
Male	1975	44	43	Excellent	Maintain
Male	1998	21	48	Excellent	Maintain
Male	1969	50	42	Fair	Encourage
Male	1977	42	44	Excellent	Maintain
Male	1980	39	41	Fair	Encourage
Male	1985	34	45	Excellent	Maintain
Male	1966	53	42	Fair	Encourage
Male	1976	43	44	Excellent	Maintain
Female	1983	36	44	Excellent	Maintain
Female	1977	42	41	Fair	Encourage
Female	1980	39	44	Excellent	Maintain
Female	1971	48	42	Fair	Encourage
Female	1980	39	41	Fair	Encourage

Source: authors.

**Table 3.** Work Ability Index—summary.

WAI	Male	Female	In Total (pcs)	In Total (%)
29	1	0	1	4
39	2	0	2	8
41	2	2	4	16
42	2	1	3	12
43	3	0	3	12
44	4	2	6	24
45	2	0	2	8
46	1	0	1	4%
47	1	0	1	4%
48	2	0	2	8%
In total	20	5	25	

Source: authors.

The table indicates specific differences that are caused by particular conditions relevant to individual workers. The schedule shows that half of the workers lack greater encouragement. Surprisingly, who also need positive stimuli are young employees (Pongpisutsopa et al. 2020). We attribute this lack of motivation to the physically hard work the young have to do.

As a brief discussion regarding the tables above, the average resulting value in terms of WAI is of 42.8, which indicates good work ability; the median is at the value of 44. It



was found out that women work ability ranges from fair to excellent. It can be interpreted as their work not being physically hard.

The values obtained using the WAI method were compared with the reference value of foreign studies; e.g., (Ilmarinen et al. 1997; Ilmarinen 2009; Karazman et al. 1999; Smrekar et al. 2019), which represent the average value of work ability for categories of men and women of the same age and performing the identical type of work. As mentioned, the work ability resulting value was measured at a value of 42.8 rendering that the examined company disposes of relatively good work ability needed to be maintained. The median of these results confirms that with the help of suitable programs, especially relating to selected age categories, it is possible to get into excellent working ability. In particular, it is about fortifying the mental and physical aspects of workers, or a combination of both attributes. By appropriate programs, the company should foster preservation, or increase of work capacity in order to improve work efficiency.

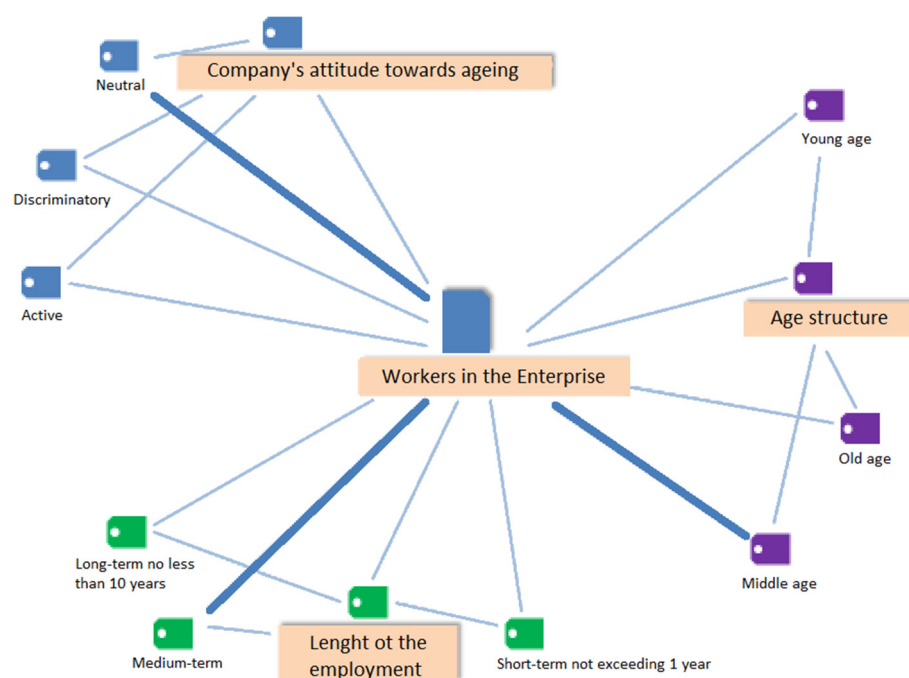
## 5. Evaluation of the Findings

Human resources have long been and will surely continue to be one of the pillars of most companies (Liu et al. 2020). Not a single corporation could operate without its employees on a long-term basis, let alone its development and making profits. Recruitment procedures present a very important business area that deserves rapt and meticulous attention (Hitka et al. 2018).

As aforementioned, this article provided quantitative as well as qualitative research considering the work ability according to the age and gender. The quantitative analysis involved a questionnaire survey focusing on the age distribution of workers (see Section 4.1) (Warwas 2019). This investigation was followed by a qualitative inquiry dealing with the satisfaction of workers with their working conditions aimed at important aspects of respondents, where most of them entered financial remuneration and fringe benefits. Older respondents very often mentioned job security. On the other hand, younger generation emphasized a possibility of further education. What most workers considered as highly important are relationships at the workplace, which was the topic of the second and third pillar. Workers do not regard age categories of workers as important whatsoever although some older employees admitted having worries about being overloaded with work and duties. As for the age strategy, respondents agreed that older colleagues could be of a great contribution to the younger ones. The survey also revealed that most workers would welcome further personal development, rating their work ability as positive. The research was followed by an application of Work Ability Index. This survey included 25 randomly chosen workers throughout age categories. To fully evaluate this index, a medical service provider compiled a questionnaire which the workers concerned should respond to.

The analysis of the work ability indicated that roughly 50% of respondents need active encouragement to develop their work ability (Freyer et al. 2019). However, this evaluation is strongly influenced by that the kind of performed job. White collar workers indicated mostly excellent evaluation and this condition should prevail and be maintained for as long as possible.

The research further revealed that older employees are a great contribution to the company regarding their experience and well-organized work–life balance, as they share experience with newcomers. What should not be omitted is both—their reliability and acquired working habits. On the other hand, they tend to underperform. Their deteriorating state of health partially results from the physically demanding jobs the organization requires them to do. The company currently takes a neutral attitude towards ageing; however, careful consideration of the age could enhance company's performance. The medium-term employment predominates in spite of the violent labor turnover of work mostly involving people in the middle-age category. These values are depicted in a map in Figure 3.



**Figure 3.** The map of the workforce distribution in the company. Source: authors.

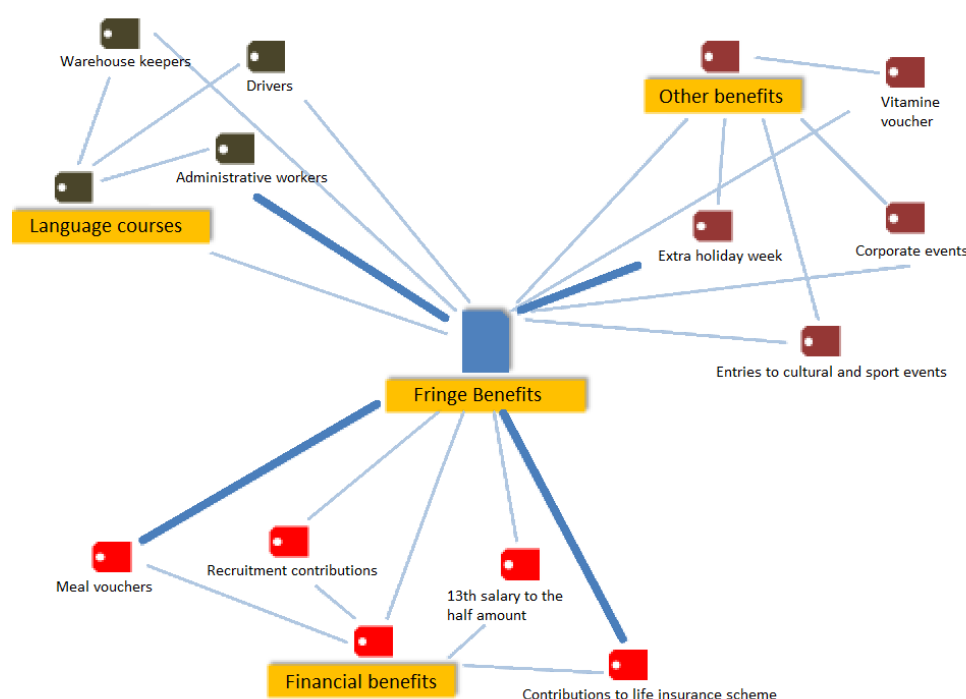
The follow-up quantitative research focused on the familiarity with the term age management, so far known only to the HR director; the others were complete strangers to it. Regarding programmes and fringe benefits, workers would mostly welcome part-time work or flexible working hours (Burlea 2007). They also agreed upon reaping more job perks which include the following:

- 13th salary to the full amount,
- medical vouchers,
- contributions to courses,
- contributions to children's camps,
- encouraging corporate events focused on teambuilding (sport events or trips),
- holiday respecting the age (focus on the age),
- other fringe benefits.

The next pillar includes good work ability of employees and fair working conditions. The evaluation suggested that middle-age and great-age workers are dispersed throughout the positions of the company. Some workers responded that physically demanding work presents a heavy load for their advanced age, stating that they would welcome flexible working hours. The suggestions include:

- introducing a clearly defined and flexible intergenerational cooperation (mixed age groups),
- encouraging intergenerational cooperation,
- lowering workload to older workers,
- an offer to cooperate with the company even after retirement,
- a possibility to train younger employees,
- etc.

A map in Figure 4 shows the current benefits which are offered by the company. The workers would also welcome additional job perks according to age categories.



**Figure 4.** Map of the current benefits in the company. Source: authors.

The research showed that the company mostly employs workers at the age of around 40 years and on. Fringe benefits are blanket; i.e., they apply to all age categories the same. The only further education provided is carried out by training courses. Older workers also lack knowledge of modern technologies and are inclined to underperform. Even in spite of these few handicaps, employing older people always brings enormous benefits to the company such as familiarity with the workflow, reliability, experience and well-organized life. To this end, an effective application of age management along with further recommendations was submitted (Burlea 2009), (Feißel et al. 2018):

- education related to the age management,
- encouraging age diversification,
- benefits to support health and healthy lifestyle,
- extra holiday as well as holiday according to the age,
- possibility to assign older employees less demanding tasks,
- training and mentoring courses,
- imposing different requirements when recruiting new employees,
- providing benefits with respect to employees' ages,
- making jobs more attractive to young workers,
- creating more opportunities for workers' education and development,
- introducing efficient technologies to facilitate work for older workers,
- changes in work activities,
- introducing part-time workload for older workers,
- possibility to cooperate with the company even after retirement.

Upon changing the conditions older employees would not have to look for a different job. The company would not have to deal with the lack of workforce, which would also facilitate the work of human resource management throughout the company (Kyriakopoulos 2011).

## 6. Discussion

Following the above manuscript section, this article focused on the human resource management in a specific transport company. Competent human resource management is reflected in employees' satisfaction throughout all the age categories (Hitka et al. 2017).

Individual work life periods tend to change with the age. It is namely in developing the potential of separate work cycle phases where age management can be applied.

Generally, the examined enterprise, as well as a lot of other companies, currently faces a distinct lack of workforce on the whole labor market and ageing of its employees (Čiutienė and Railaitė 2015). Quantitative and qualitative research conducted in the previous paper parts showed that it is specifically the effective application of age management that could be of a great contribution to enterprises.

In our study, these two research investigations were complemented by Work Ability Index which indicated that the work performance ranges from fair to excellent in the company examined. This desirable trend should therefore be maintained. By introducing the principles of age management, various companies could cut labor turnover in the productive age by strengthening employees' motivation to stay (Fuertes et al. 2013). Another great contribution of the performed research lies in a more effective use of the potential of older workers which would also result in reducing absenteeism of older employees (Sippli et al. 2021).

Based on the executed research steps, and compared to other literature sources, the designed procedure could be regarded as the novel methodological guideline for the purpose of applying the principles of age management in human resource management when using WAI approach, and thus, it may help towards more effective and sustainable corporate recruitment strategy.

## 7. Conclusions

Human resource management respecting age, i.e., age management, without limitations, includes satisfaction of employees in companies irrespective of their age. Individuals throughout their work life periods are regarded as a great opportunity and considerable potential which may be benefited from within single work life periods. Age management, on the contrary, rejects stereotypes of age categories, gender, ethnic groups, etc.

As mentioned in previous parts of the manuscript, its objective was to propose an innovative recruitment methodological guideline when using age management principles for a specific transport company; namely, human resource management of a given company was considered, the Work Ability Index being applied to aim at a selected group of employees in order to examine their work abilities in detail. The very investigation of a life cycle of employees consisted of multiple age categories and identified a drop in a level of their work ability. The undertaken survey covered 25 randomly selected employees (chosen by the company physician to avoid research bias), out of which 20 men and five women of all the age categories participated in the research. As for the very findings, the WAI mean resulting value was of 42.8, which entails relative favorable and positive work ability. The median value was quantified at a level of 44. Furthermore, half of the total work ability had to be encouraged. It also was ascertained that the work ability of women varied from fair to excellent. It can be demonstrated by the fact of their work not being physically hard.

Among other things, the conducted research, thus, proves the difficulty of the questionnaire survey and Work Ability Index in the practice environment, as well as coordination of the occupational physician. Workers did not want to devote working time to conduct research and surveys due to the disruption of their work process. On the one hand, they had to finish their duties later, and recovery after the interruption is difficult for them, since they are less focused on the activity being performed. Notwithstanding, our research shows that it is necessary to pay special attention to the employee personal development at each stage of his work cycle.

Based on the elaborated literature review as well as compiled research study, and the achieved results, even though a wide array of scientific publications have discussed the issues of age management, human resource management or WAI, none of them have designed the same combination of these topics in one single unified methodology when

applying alike data set and by implementing to the suchlike enterprise, as our study did. That is what the novelty of our research consists in.

As for recommendations for future research in an addressed subject, special attention and more profound analysis should be paid to, e.g., the following: financial evaluation of the WAI instrument application, assessing an effect of training and mentoring in the field of age management, encouraging age diversification, benefits to support health and healthy lifestyle (even extra holiday), influence of making jobs more attractive to younger workers, creating more opportunities for workers' education and development, impact of introducing part-time workload as well as efficient progressive (smart) technologies to facilitate work for older workers, and so forth.

**Author Contributions:** Conceptualization, M.H. and O.S.; methodology, M.H. and L.B.; validation, O.S. and M.S.; formal analysis, D.N.Y. and P.G.; investigation, M.H., L.B., and D.N.Y.; resources, M.H. and O.S.; data curation, M.H. and P.G.; writing—original draft preparation, M.H.; writing—review and editing, O.S., M.S. and P.S.; visualization, P.G.; supervision, O.S., L.B., and D.N.Y.; project administration, O.S.; funding acquisition, M.H. and O.S. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable.

**Acknowledgments:** This manuscript was supported as part of the research project entitled “Autonomous mobility in the context of regional development LTC19009” of the INTER-EXCELLENCE program, the VES 19 INTER-COST subprogram.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

- Azhdari, Golnaz, Mohammad Lagzian, Ali Shirazi, and Marjan Fayyazi. 2019. Electronic human resource management adoption model in knowledge base small and medium enterprises. *Iranian Journal of Information Processing Management* 34: 535–56.
- Batarlienė, Nijolė, Kristina Čižiūnienė, Kristina Vaičiūtė, Ingrida Šapalaitė, and Aldona Jarašūnienė. 2017. The Impact of Human Resource Management on the Competitiveness of Transport Companies. *Procedia Engineering* 187: 110–16. [\[CrossRef\]](#)
- Brillet, Franck, and Franck Gavioille. 2014. Le face à face entreprises/seniors: Nouveaux enjeux et nouvelles problématiques. *Question (s) de Management* 2: 47–59. [\[CrossRef\]](#)
- Brooke, Libby. 2003. Human resource costs and benefits of maintaining a mature age workforce. *International Journal of Manpower* 24: 260–83. [\[CrossRef\]](#)
- Burlea, Adriana Schiopoiu. 2007. An Approach of the Knowledge Management for the Development of the Organisational Commitment. In *Advances in Information Systems Development*. Boston: Springer, pp. 313–23.
- Burlea, Adriana Schiopoiu. 2009. Success Factors for an Information Systems Projects Team: Creating New Context. Innovation and Knowledge Management in Twin Track Economies: Challenges and Solutions. In *Proceedings of the 11th International Business Information Management Association Conference, IBIMA 2009, Cairo, Egypt, 4–6 January*; Vol. 9, pp. 203–07.
- Chalikias, Miltiadis, Grigorios Kyriakopoulos, Michalis Skordoulis, and Michalis Koniordos. 2014. Knowledge Management for Business Processes: Employees' Recruitment and Human Resources' Selection: A Combined Literature Review and a Case Study. *Communications in Computer and Information Science* 466: 505–20. [\[CrossRef\]](#)
- Cheng, Teng Yuan, Yue-Qi Li, Yu-En Lin, and Hsiang-Hsuan Chih. 2020. Does the fit of managerial ability with firm strategy matters on firm performance. *The Journal of Asian Finance, Economics, and Business* 7: 9–19. [\[CrossRef\]](#)
- Čiutienė, Rūta, and Rasa Railaitė. 2015. Age management as a means of reducing the challenges of workforce aging. *Engineering Economics* 26: 391–97. [\[CrossRef\]](#)
- Dujardin, Jean-Marie, David Randaxhe, and Annie Cornet. 2014. Age management: Reality a výzvy. *Management Avenir* 7: 123–30. [\[CrossRef\]](#)
- Egdell, Valerie, Gavin Maclean, Robert Raeside, and Tao Chen. 2020. Age management in the workplace: Manager and older worker accounts of policy and practice. *Ageing & Society* 40: 784–804. [\[CrossRef\]](#)
- Feißel, Annemarie, Richard Peter, Enno Swart, and Stefanie March. 2018. Developing an extended model of the relation between work motivation and health as affected by the work ability as part of a corporate age management approach. *International Journal of Environmental Research and Public Health* 15: 779. [\[CrossRef\]](#)
- Fisher, Gwenith G., Donald M. Truxillo, Lisa M. Finkelstein, and Lauren E. Wallace. 2017. Age discrimination: Potential for adverse impact and differential prediction related to age. *Human Resource Management Review* 27: 316–27. [\[CrossRef\]](#)



- Freyer, Marion, Maren Formazin, and Uwe Rose. 2019. Factorial validity of the work ability index among employees in Germany. *Journal of Occupational Rehabilitation* 29: 433–42. [\[CrossRef\]](#)
- Fuertes, Vanesa, Valerie Egdell, and Ronald McQuaid. 2013. Extending working lives: Age management in SMEs. *Employee Relations* 35: 272–93. [\[CrossRef\]](#)
- Grah, Barbara, Ema Perme, Simon Colnar, and Sandra Penger. 2019. Age management: What can we learn from high-end luxury fashion designer with more than 50 years of working experience? *Organizacija* 52: 325–44. [\[CrossRef\]](#)
- Hennekam, Sophie. 2016. Vitality of older workers and its relationship with performance, career satisfaction and career success. *Management Avenir* 1: 15–32. [\[CrossRef\]](#)
- Hitka, Miloš, Silvia Lorincová, Gabriela Pajtinková Bartáková, Lenka Ližbetinová, Peter Štarchoň, Chenguang Li, Elena Zaborova, Tatiana Markova, Jarmila Schmidtová, and Ladislav Mura. 2018. Strategic tool of human resource management for operation of SMEs in the wood-processing industry. *BioResources* 13: 2759–74. [\[CrossRef\]](#)
- Hitka, Miloš, Silvia Lorincová, Lenka Ližbetinová, Gabriela Pajtinková Bartáková, and Martina Merková. 2017. Cluster analysis used as the strategic advantage of human resource management in small and medium-sized enterprises in the wood-processing industry. *BioResources* 12: 7884–97. [\[CrossRef\]](#)
- Ilmarinen, Juhani, Kaija Tuomi, and Matti Klockars. 1997. Changes in the work ability of active employees over an 11-year period. *Scandinavian Journal of Work, Environment & Health* 23: 49–57.
- Ilmarinen, Juhani. 2009. Work ability—A comprehensive concept for occupational health research and prevention. *Scandinavian Journal of Work, Environment & Health* 35: 1–5. [\[CrossRef\]](#)
- Johnson, Sheena J., Sabine Machowski, Lynn Holdsworth, Marcel Kern, and Dieter Zapf. 2017. Age, emotion regulation strategies, burnout, and engagement in the service sector: Advantages of older workers. *Revista de Psicología del Trabajo y de las Organizaciones* 33: 205–16. [\[CrossRef\]](#)
- Joniaková, Zuzana, and Jana Blšťáková. 2015. Age Management as Contemporary Challenge to Human Resources Management in Slovak Companies. *Procedia Economics and Finance* 34: 202–9. [\[CrossRef\]](#)
- Kampf, Rudolf, Silvia Lorincova, Larisa M. Kapustina, and Lenka Lizbetinova. 2017. Motivation level and its comparison between senior managers and blue collar workers in Slovak small and medium-sized transport enterprises. *Communications* 19: 43–49.
- Karazman, Rudolf, Irene Kloimuller, Heinrich Geissler, and Inge Karazman-Morawetz. 1999. 'Effect typology' and work ability index: Evaluating the success of health promotion in elder workforce. *Experimental Aging Research* 25: 313–21. [\[CrossRef\]](#) [\[PubMed\]](#)
- Kloimüller, Irene, Rudolf Karazman, Heinrich Geissler, Inge Karazman-Morawetz, and H. Haupt. 2000. The relation of age, work ability index and stress-inducing factors among bus drivers. *International Journal of Industrial Ergonomics* 25: 497–502. [\[CrossRef\]](#)
- Kröll, Claudia, Philipp Doebl, and Stephan Nüesch. 2017. Meta-analytic evidence of the effectiveness of stress management at work. *European Journal of Work and Organizational Psychology* 26: 677–93. [\[CrossRef\]](#)
- Kyriakopoulos, Grigorios L. 2011. The role of quality management for effective implementation of customer satisfaction, customer consultation and self-assessment, within service quality schemes: A review. *African Journal of Business Management* 5: 4901–15. [\[CrossRef\]](#)
- Kyriakopoulos, Grigorios. 2012. Half a century of management by objectives (MBO): A review. *African Journal of Business Management* 6: 1772–86. [\[CrossRef\]](#)
- Lacaze, Delphine. 2014. Transmission entre générations et changement organisationnel: L'impossible équation. *Gestion 2000* 31: 15–32. [\[CrossRef\]](#)
- Liu, Meihua, Mao Tian, Xiaoli Chen, and Jianbin Wu. 2020. A Reliable Transport Scheme for Human Opportunistic Networks. *Applied Sciences* 10: 6658. [\[CrossRef\]](#)
- Loos-Baroin, Jocelyne. 2006. De la gestion des seniors à la gestion des âges: Quelques enseignements de comparaisons internationales. *Management Avenir* 1: 121–38. [\[CrossRef\]](#)
- Mamcarz, Piotr, Paulina Drożdziel, Lucia Madleňáková, Andrzej Sieradzki, and Paweł Drożdziel. 2019. Level of occupational stress, personality and traffic incidents: Comparative study of public and freight transport drivers. *Transportation Research Procedia* 40: 1453–58. [\[CrossRef\]](#)
- Mathis, Robert L., John H. Jackson, and Sean R. Valentine. 2016. *Human Resource Management*, 14th ed. Stamford: Cengage Learning, ISBN 978-1-133-95310-4.
- Nasution, Abdillah Arif, and Keulana Erwin. 2019. Analysis of Transportation Selection for Travel Work. *LOGI—Scientific Journal on Transport and Logistics* 10: 1–10. [\[CrossRef\]](#)
- Nor, Che Supian Mohamad, Ramesh Kumah Haji Mohamed, Baderisang Mohamed, and Nor Aisha Che Hassan. 2020. Human resources management practices and its impact on employee commitment mong staffs of road transport department, Perak, Malaysia. *Journal of Environmental Treatment Techniques* 8: 28–34.
- Pak, Karen, Dorien TAM Kooij, Annet H. De Lange, and Marc JPM Van Veldhoven. 2019. Human resource management and the ability, motivation and opportunity to continue working: A review of quantitative studies. *Human Resource Management Review* 29: 336–52. [\[CrossRef\]](#)
- Petersson, Niels P. 2018. Managing a People Business in Times of Uncertainty: Human Resources Strategy at Ocean Transport & Trading in the 1970s. *Enterprise and Society* 19: 88–123. [\[CrossRef\]](#)
- Pongpisutsopa, Suchitra, Sotarath Thammaboosadee, and Rojjalak Chuckpaiwong. 2020. Factors Affecting HR Analytics Adoption: A Systematic Review Using Literature Weighted Scoring Approach. *Asia Pacific Journal of Information Systems* 3: 847–78. [\[CrossRef\]](#)

- Pranjic, Nurka, Juan Manuel Garcia Gonzales, and Ljiljana Cvejanov-Kezunović. 2019. Perceived work ability index of public service employees in relation to ageing and gender: A comparison in three European countries. *Zdravstveno Varstvo* 58: 179–88. [\[CrossRef\]](#)
- Rašticová, Martina. 2013. *Age Management: Actual Challenges and Promising Solutions Regarding the Ageing European Population*. Brno: Academic publisher CERM, ISBN 978-80-7204-848-9.
- Rašticová, Martina, Nad'a Birčiaková, Monika Bédiová, and Jana Mikušová. 2019. Older workers economic activity and the health status—The implication of age management. *Polish Journal of Management Studies* 19: 322–37. [\[CrossRef\]](#)
- Sampaio, Rosana Ferreira, Cecília Martins Coelho, Fábio Bonfim Barbosa, Marisa Cotta Mancini, and Verônica Franco Parreira. 2009. Work ability and stress in a bus transportation company in Belo Horizonte, Brazil. *Ciencia e Saude Coletiva* 14: 287–96. [\[CrossRef\]](#) [\[PubMed\]](#)
- Sippli, Khira, Pia Schmalzried, Monika A. Rieger, and Susanne Voelter-Mahlknecht. 2021. Challenges arising for older workers from participating in a workplace intervention addressing work ability: A qualitative study from Germany. *International Archives of Occupational and Environmental Health*. in press. [\[CrossRef\]](#)
- Smrekar, Martina, Alenka Franko, Olivera Petrak, and Lijana Zaletel-Kragelj. 2019. Validation of the Croatian version of work ability index (WAI) in population of nurses on transformed item-specific scores. *Slovenian Journal of Public Health* 59: 57–64. [\[CrossRef\]](#)
- Sukalova, Viera. 2020. The impact of legislation on the human resources management of freight transport companies. Paper presented at 24th International Scientific Conference on Transport Means 2020, Kaunas, Lithuania, September 30—October 2; pp. 248–54.
- Tonelli, Maria Jose, Jussara Pereira, Vanessa Cepellos, and João Lins. 2020. Ageing in organizations—A view of HR professionals on the positioning of mature managers and adoption of age management practices. *RAUSP Management Journal* 55: 127–42. [\[CrossRef\]](#)
- Urbancova, Hana. 2019. Working time organisation of senior workers in agricultural companies with a focus on age management. *Studies in Agricultural Economics* 121: 161–65. [\[CrossRef\]](#)
- Urbancová, Hana, Lucie Vnoučková, Zdenek Linhart, Gabriela Ježková Petrů, Roman Zuzák, Lenka Holečková, and Zita Prostějovská. 2020. Impact of age management on sustainability in czech organisations. *Sustainability* 12: 1064. [\[CrossRef\]](#)
- Verheyen, Tanja, Nick Deschacht, and Marie-Anne Guerry. 2016. The occurrence of demotions regarding job level, salary and job authority. *Personnel Review* 45: 1217–39. [\[CrossRef\]](#)
- Warwas, Izabela. 2019. Age management and its architecture in Polish traditional versus knowledge-based companies. *Argumenta Oeconomica* 43: 407–26. [\[CrossRef\]](#)