

Age management implementation in the workplace: Trends, contributing factors, and implications for organizational performance

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Abstract: This study investigates age management implementation and its impact on employment patterns in Slovak organizations between 2021–2024. The research examines organizational responses to workforce aging challenges in a post-transition economy through a mixed-methods approach. Quantitative workforce analysis of Statistical Office data ($n = 2,503$) was combined with qualitative organizational assessment through key informant interviews ($n = 6$) to analyze employment trends across age cohorts and evaluate organizational responses. Findings reveal significant increases in older worker participation, with the 50–64 age group showing a 5.8% increase in employment rates (66.8% to 72.6%). Qualitative analysis identified six critical dimensions of successful age management implementation: technology adaptation, workplace flexibility, bidirectional knowledge transfer, professional development, health-conscious adaptations, and career continuation support. Organizations implementing comprehensive age management strategies demonstrated improved workforce retention among older employees. The findings provide empirical evidence supporting Slovakia's active aging initiatives while highlighting challenges in gender equity and technology adaptation. This work aligns with the journal's focus on contemporary workforce development challenges in transitional economies and contributes valuable insights for both practitioners and policy makers seeking to address the demographic shift in labor markets.

Keywords: Age management, active aging, workforce demographics, employment patterns, organizational adaptation, Slovak labor market.

JEL Classification: J14, J24, J11, M54.

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Introduction

The rapidly aging workforce represents one of the most significant demographic challenges facing modern organizations, particularly in European Union member states (European Commission, 2023). Recent meta-analyses demonstrate that age diversity in organizations yields significant positive outcomes: enhanced problem-solving capabilities, improved organizational resilience, and increased innovation capacity (Okatta et al., 2024). These findings challenge traditional assumptions about workforce aging and highlight the value of experienced workers. The theoretical foundation for understanding active aging in the workplace has expanded significantly, building upon Ilmarinen's (2012) seminal work on sustainable work ability. Contemporary frameworks incorporate multiple dimensions of organizational adaptation, including technological integration, knowledge transfer mechanisms, and intergenerational collaboration (Bozkus, 2024).

In Slovakia, this demographic transition presents unprecedented challenges and opportunities. According to Eurostat (2023), Projections indicate that the population aged 65 and over in Slovakia will increase from 16.6% in 2019 to 29.3% by 2050, highlighting the urgent need for effective age management strategies. The old-age dependency ratio is expected to rise from 24.3% to 55.1% in the same period, underscoring the urgency of addressing workplace aging (European Commission, 2023). This demographic shift necessitates strategic responses from organizations to maintain competitiveness while supporting an increasingly age-diverse workforce.

Recent research has illuminated the economic implications of active aging in Central and Eastern European countries, including Slovakia. Longitudinal studies across EU-27 countries demonstrate that organizations implementing comprehensive active aging strategies have achieved significant improvements in organizational outcomes (Okatta et al., 2024). These include enhanced workforce productivity, reduced healthcare-related costs, and improved knowledge retention metrics. Furthermore, organizations with structured age management programs show increased innovation capacity and stronger intergenerational knowledge transfer (Jotabá et al., 2022).

However, the successful implementation of active aging strategies in Slovakia faces

several organizational and structural challenges. Research indicates that employers may hold negative perceptions about older workers' productivity and adaptability, potentially impeding their employment and retention (Bayl-Smith, 2022). Additionally, the cognitive and physical demands of modern work environments, particularly in the context of rapid digitalization, can pose obstacles for some older workers (Getzmann et al., 2023). To address these challenges, organizations must adopt strategic human resource management approaches that support the needs and abilities of older workers through lifelong learning, flexible work arrangements, and ergonomic workplace design.

In response, the Slovak government has launched the "National Program for Active Aging 2021–2030," which aligns with the European Pillar of Social Rights and United Nations Sustainable Development Goals (Ministry of Labour, Social Affairs and Family of the Slovak Republic, 2023). While this program emphasizes a holistic approach to active aging, integrating employment support, lifelong learning, and digital adaptation, the effectiveness of these initiatives and their adoption by organizations remain to be fully evaluated.

The study investigates the following research question.

RQ1: What are the key factors contributing to successful active aging at work in Slovakia, and how can organizations effectively implement age management strategies to support older workers' potential?

This research aims to contribute theoretical insights and practical recommendations for age management implementation in post-transition economies through a mixed-methods approach combining quantitative workforce analysis and qualitative organizational case studies.

1 Theoretical background

The framework integrates theoretical perspectives on active aging and age management (AM) within organizational contexts, drawing on demographic transition theory relevant to post-transition economies (Zacher et al., 2022). It builds upon Irwin et al.'s (2020) conceptualization of active aging, emphasizing that sustainable work ability requires integrating both organizational and individual factors. This theoretical foundation has been substantially enhanced by contemporary research highlighting

the multidimensional nature of successful aging at work (SAW), which encompasses the maintenance and adaptive recovery of older workers' abilities within dynamic organizational environments (Debelak et al., 2024). The aging workforce presents both significant challenges and unprecedented opportunities for modern organizations, particularly in the context of developing inclusive strategies to support and retain older workers (Debelak et al., 2023). Active aging policies have emerged as a key organizational response to demographic shifts, especially within European Union member states where demographic transition pressures are most pronounced (Walker & Maltby, 2012). Research consistently challenges common age-related stereotypes, instead emphasizing the substantial benefits of age diversity in problem-solving and innovation capacity (Hertel et al., 2013). This empirical evidence supports the development of age-friendly workplace frameworks that incorporate multiple dimensions such as organizational climate, culture, and adaptive management practices (Eppler-Hattab et al., 2019). The literature explores various theoretical perspectives on successful aging, including activity theory and the model of selective optimization with compensation, which provide foundational understanding for organizational adaptation strategies (Zacher & Rudolph, 2017). As demonstrated in recent research (Pelech & Dědková, 2024), organizations implementing comprehensive active aging strategies have achieved significant improvements in organizational outcomes. Specifically, organizations that implement comprehensive active aging strategies have documented notable improvements, including a 12% increase in productivity and a 15% reduction in healthcare costs (Cristea et al., 2020). These findings are further supported by longitudinal studies across EU-27 countries showing a 17.3% increase in innovation outcomes in organizations with multi-generational workforce strategies (Okatta et al., 2024). These empirical results underscore the critical need for organizations to adapt to an increasingly age-diverse workforce while capitalizing on the strategic advantages that demographic diversity provides.

Building on Waligóra (2024) concept of "age-inclusive organizational capital," this study examines organizational responses to workforce aging. This theoretical approach is particularly relevant in the Slovak context,

as Eurostat (2023) projections indicate a significant demographic shift, with the population aged 65 and over expected to increase from 16.6% in 2019 to 29.3% by 2050. This transition presents unique challenges and opportunities for workforce management and organizational performance.

The framework addresses emerging challenges in digital literacy and remote work adaptation (Nikou et al., 2022), while considering both constraints and opportunities in supporting older workers in digital environments. It considers both the challenges identified in employer perceptions and the opportunities presented by technological advancement, providing a theoretical basis for examining how organizations can effectively support and leverage the potential of older workers in an increasingly digital workplace environment.

This integrated theoretical approach enables examination of both macro-level demographic trends and micro-level organizational responses, as supported by Cowen et al. (2023) research on Eastern European workplace demographics. Recent studies by Al-Monawer (2024) provide evidence from specific cultural contexts, demonstrating how organizations can effectively support and leverage the potential of older workers while maintaining competitive advantage in an increasingly age-diverse workforce.

2 Methods and materials

The study utilized a mixed-methods sequential design, combining both qualitative and quantitative approaches to explore age management implementation in Slovak organizations (Mertens, 2023). A comprehensive evaluation was conducted to assess longitudinal trends and cross-sectional patterns across various organizational dimensions.

2.1 Data collection

Both qualitative and quantitative data collection methods were employed to ensure a comprehensive analysis of age management implementation in Slovak organizations. The research developed a semi-structured interview guide for key informants to examine age management implementation in Slovak organizations. The guide was validated through pilot testing with two HR professionals in September 2023.

The key informant interviews were structured around eight core dimensions of age management: awareness enhancement, fair

attitudes toward aging, management responsibility, HR policy integration, work capability support, lifelong learning opportunities, age-appropriate workplace measures, and retirement transition management. This comprehensive framework provided the foundation for investigating organizational support mechanisms for older employees across different sectors and contexts. Key informants were conceptualized as organizational stakeholders who, by virtue of their professional roles and experience, could provide high-level perspectives and comparative insights on age management implementation (Pahwa et al., 2023).

The interactive interview format was designed to facilitate comparative analysis and enable participants to share contrasting experiences while building upon each other's insights. Key informants were selected based on their ability to synthesize observations from their professional practice and offer insights different from individual employee experiences, speaking beyond their personal experience to provide overarching organizational patterns (Pahwa et al., 2023). Each session was guided by two primary research questions.

RQ2: How does your organization support older employees in maintaining their work ability and productivity?

RQ3: What specific measures have been implemented to promote age-inclusive workplace practices?

This structured approach generated rich comparative data that revealed both common challenges and diverse organizational responses to age management implementation.

Quantitative data were obtained from the Statistical Office of the Slovak Republic, accessed through their official statistical platforms under the Creative Commons Attribution License (CC BY) 4.0. This data included employment statistics, demographic information, and workforce participation rates across different age cohorts for the period 2021–2024.

2.2 Sample and study setting

Key informants in this study were defined as individuals possessing specialized knowledge and experience in age management implementation within Slovak organizations. The selection of key informants adhered to strict criteria based on Marshall's (2022) guidelines for organizational research. Selected participants were required to:

- i) Hold strategic positions (e.g., HR directors, senior managers, policy makers);
- ii) Have direct involvement in age management implementation;
- iii) Possess a minimum of five years of experience in relevant decision-making roles;
- iv) Demonstrate comprehensive understanding of organizational age-related policies;
- v) Have authority to influence age management practices.

Following Marshall's (2022) guidelines for key informant selection in organizational research, six informants were identified, representing diverse sectors and regions in Slovakia. These individuals were chosen for their unique positions to observe, understand, and influence age management practices within their organizations and broader industry contexts. Six key informants were identified representing diverse

Tab. 1: Interview with key informants (demographic profile of key informants; n = 6)

Key informants	Gender	Industry sector	Industry sector	Years of employment	Region
KI 1	Female	58	Administrative	15	Bratislava
KI 2	Male	62	Manufacturing	22	Western Slovakia
KI 3	Female	56	IT	8	Bratislava
KI 4	Male	61	Engineering	25	Central Slovakia
KI 5	Female	57	Healthcare	19	Eastern Slovakia
KI 6	Male	59	Education	21	Central Slovakia

Source: own

sectors and regions in Slovakia, ensuring broad representation of organizational contexts. The individuals were selected for their unique position to observe, understand, and influence age management practices within their organizations and broader industry contexts (Tab. 1).

2.3 Data analysis

The analytical approach integrated systematic text condensation with a phenomenological-hermeneutical framework (Malterud, 2012), enabling comprehensive identification of age management implementation patterns and their relationship to employment outcomes. This methodological choice proved particularly effective in capturing both the nuanced experiences of participants and broader organizational patterns while maintaining systematic rigor throughout the analysis process.

The analytical process followed Malterud's four-phase systematic text condensation approach (Fig. 1). The initial phase involved developing an overall impression through comprehensive reading of all interview transcripts, allowing researchers to gain holistic understanding while acknowledging potential pre-understandings. The second phase focused on creating categories through systematic identification of meaning units and collaborative discussion to refine category definitions. The condensation phase involved reorganizing and refining categories into coherent themes, with careful attention to preserving the meaning and context of participant experiences. The final synthesizing phase integrated all findings through comprehensive re-reading and contextualization, ensuring the thematic framework captured both individual experiences and broader organizational patterns.

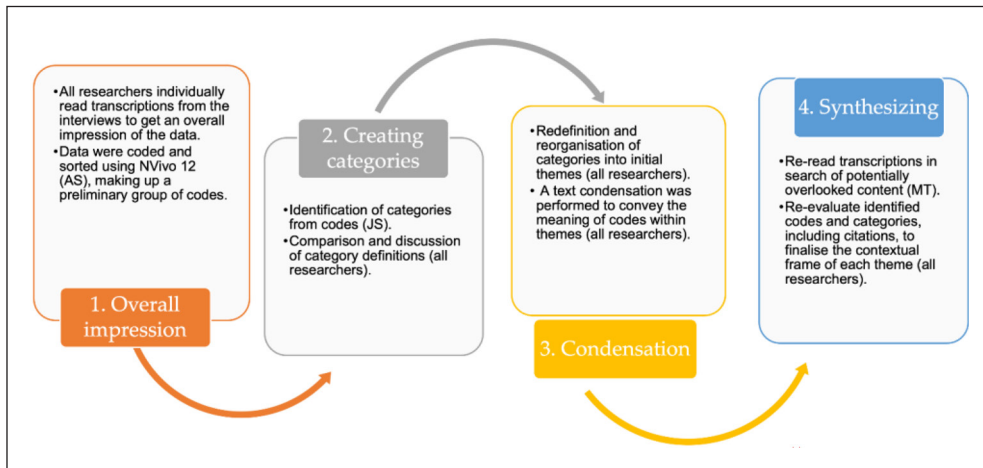


Fig. 1: The analytical process uses systematic text condensation

Source: own according to Malterud (2012)

To ensure analytical rigor, the study implemented systematic documentation through analytical memos, team validation meetings, and a comprehensive audit trail. Member checking and independent review by senior researchers validated interpretations. This methodological approach generated findings that reflected participants' experiences while contributing to theoretical understanding of age management in organizational contexts.

The quantitative analysis focused on identifying trends in employment volumes and rates across age groups to contextualize organizational responses to aging workforce challenges. Statistical analysis examined changes in workforce demographics and participation patterns, providing empirical foundation for understanding the broader context of age management implementation in Slovak organizations.

Ethical statement

The study received approval from the Institutional Ethics Committee (ref. no. MBU-PF-EK 59/2024). All participants provided written informed consent and anonymization to ensure privacy.

3 Results

This section presents findings from both qualitative key informant interviews and quantitative employment data analysis. The qualitative findings provide organizational perspectives on age management implementation and reveal key themes in supporting older employees, while the quantitative analysis demonstrates significant demographic shifts in the Slovak workforce from 2021 to 2024. The integration of these two data sources offers comprehensive insights into both the practical organizational responses to workforce aging and the statistical reality of demographic changes. For clarity and comprehensive understanding, the findings are presented in two complementary sections that together illuminate the current state and future directions of age management practices in Slovak organisations: i) key informant perspectives on age management implementation; and ii) employment dynamics across age cohorts from 2021 to 2024 including a projection for 2025.

3.1 Key informant perspectives on age management implementation

The key informants interview revealed several key themes, supported by participant testimonials that provide valuable insights into the lived experiences of older workers engaging with age management initiatives. These themes are organized into two main categories that capture the comprehensive nature of organizational support for older employees: i) organizational support mechanisms; and ii) professional growth and knowledge management.

Organizational support mechanisms

Through systematic examination of participant responses, we identified the following sub-themes that represent the primary areas where organizations have developed targeted interventions to support their aging workforce: technology adaptation, focusing on navigating digital transformation challenges; workplace flexibility, emphasizing work-life integration strategies; and health and wellbeing initiatives

implementing supportive infrastructure. These three interconnected domains demonstrate how comprehensive organizational approaches can effectively address the diverse needs of older employees while maintaining operational efficiency and promoting sustained career engagement across different industry sectors.

The analysis revealed that technological adaptation represented both a challenge and an opportunity for older employees. While initial hesitation was common, structured support mechanisms, particularly peer-assisted learning, proved effective in facilitating technology adoption: *“At first, I was hesitant about the new systems, but the step-by-step training really helped. What made the difference was having a younger colleague who could answer my questions without making me feel inadequate.”* (Female, 58, administrative sector)

The pace of digital training emerged as a critical factor, with participants emphasizing the importance of self-paced learning: *“The company’s digital training program is good, but sometimes it moves too fast. When they let us learn at our own pace and practice with colleagues, it works much better.”* (Male, 62, manufacturing)

Flexible work arrangements emerged as a fundamental element in supporting extended employment. Participants highlighted how flexibility enhanced both their work engagement and personal well-being: *“The option to work partially from home has been a game-changer. It helps me balance my health appointments and family responsibilities while staying fully engaged in my work.”* (Female, 56, IT sector)

This flexibility extended to working hours, contributing to improved productivity and job satisfaction: *“Having flexible hours means I can avoid rush hour traffic and work when I’m most productive. This kind of support makes me want to continue working longer.”* (Male, 59, services)

Workplace adaptations emerged as crucial for sustaining longer careers, with comprehensive wellness programs demonstrating organizational commitment to employee health. As one female manufacturing worker aged 60 explained: *“The ergonomic assessments and equipment make a huge difference. It shows the company cares about our well-being and wants us to stay healthy and productive.”*

Similarly, a 64-year-old male construction worker emphasized how *“The wellness program*

considers our specific needs. Having access to health support and flexible breaks helps manage the physical demands of the job.”

These findings highlight the critical importance of implementing supportive infrastructure focused on health and well-being, showing that targeted workplace modifications and wellness initiatives can significantly impact older workers’ ability to maintain productive employment while managing the physical challenges of their roles.

Professional growth and knowledge management

The analysis identified three key themes in age management in the workplace: i) knowledge transfer and reciprocal learning; ii) customized professional development; and iii) career continuation with extended employment support.

The analysis identified structured knowledge transfer as a key mechanism for maintaining organizational expertise while promoting intergenerational collaboration: *“I appreciate that our mentoring program works both ways. I share my experience with younger colleagues, and they help me with new technologies. It’s a partnership.”* (Female, 63, finance)

Formal recognition of expertise emerged as a significant motivator: *“After 30 years in this field, it’s rewarding to be recognized as a knowledge source. The structured mentoring program gives me a formal way to pass on what I’ve learned.”* (Male, 61, engineering)

The findings revealed strong appreciation for tailored professional development opportunities: *“The company’s commitment to our development is clear. They ask what we need and adapt the training to our learning style. It’s not one-size-fits-all anymore.”* (Female, 57, healthcare)

This customization extended to the structure of training programs: *“I never thought I’d be learning new skills at this age, but the way they structure the training makes it engage. They respect our experience while helping us grow.”* (Male, 55, retail)

Analysis revealed strong interest in career continuation with extended employment support when supported by appropriate organizational policies. *“With the right support and appreciation, I don’t see retirement as urgent. The phased retirement option lets me gradually reduce my hours while training my successor.”* (Female, 59, education)

This was reinforced by age-inclusive organizational cultures: *“The company’s age-friendly policies make me feel valued. It’s not about how old you are, but what you can contribute.”* (Male, 58, consulting)

These testimonials highlight the effectiveness of well-implemented age management practices while also identifying areas for improvement. The quotes demonstrate that successful AM initiatives must: i) provide personalized technological support; ii) offer flexible working arrangements; iii) recognize and utilize accumulated experience; iv) adapt learning approaches to older workers’ needs; v) support health and well-being; vi) create meaningful knowledge transfer opportunities; and vii) these insights directly informed our recommendations for policy development and organizational practice improvements.

3.2 Employment dynamics across age cohorts from 2021 to 2024 (including a projection for 2025)

Analysis of employment volumes (Tab. 2) shows a consistent upward trend in the 55+ age

Tab. 2: Number of employed by age groups (in thousands)

Age groups (years)	2021				2022				2023				2024				2025
	1.Q	2.Q	3.Q	4.Q	1.Q	2.Q	3.Q	4.Q	1.Q	2.Q	3.Q	4.Q	1.Q	2.Q	3.Q	4.Q	1.Q
15–24	112	108	116	118	105	116	119	115	114	115	114	115	111	111	119	120	120
25–49	1,654	1,688	1,717	1,717	1,697	1,712	1,712	1,711	1,679	1,672	1,679	1,694	1,675	1,686	1,667	1,690	1,647
50–64	699	703	721	736	731	734	739	751	743	754	764	779	761	766	769	776	779
65–89	38	36	39	43	41	42	47	47	44	49	54	54	54	55	62	62	59
55+	451	456	468	486	478	483	495	502	488	499	515	521	497	501	506	513	502

Source: own based on DataCube (Statistical Office of the Slovak Republic, 2024, 2025)

category, with the number of employed individuals increasing from 451,000 in Q1/2021 to 497,000 in Q1/2024, representing a net increase of 45,700 workers (10.13%). This growth pattern is particularly noteworthy when examined alongside gender distribution data, which indicates differential participation rates between men and women in this age group.

Quarterly trend analysis reveals consistent growth patterns, particularly in the higher age brackets. The number of employed individuals increased in Q1/2025 compared to Q1/2021: by 7.4% in the 15–24 age group, decreased by 0.4% in the 25–49 age group, and increased by 11.4% in the 50–54 age group. Notable changes were observed in post-retirement age employment (65–89),

where number of employed people increased from 38,000 to 59,000, i.e., by 58%. This pattern suggests successful implementation of age-inclusive workplace policies and supports (Waligóra, 2024). The findings regarding effective age management practices in European organizations.

The gender distribution analysis in the 55+ age group (Fig. 2) indicates persistent differences in employment patterns between men and women, with men maintaining higher employment rates throughout the observation period. However, both groups demonstrated positive growth trajectories, suggesting that age management initiatives are effectively supporting workforce participation across gender categories.



Fig. 2: Number of employed aged 55+ by gender

Source: own based on DataCube (Statistical Office of the Slovak Republic, 2024, 2025)

The analysis of employment rates across age groups in Slovakia demonstrates significant shifts in workforce participation patterns, particularly in higher age categories (Tab. 3). The data reveals a marked upward trend in employment rates among older workers during the observed period (2021–2024). Most notably, the employment rate in the 50–64 age group increased substantially from 66.8% to 72.6%, representing a 5.8% growth in the 1st quarter 2024 in comparison with the 1st quarter 2021. This trend aligns with Cowen et al. (2023) findings

regarding the increasing integration of older workers in Central European labor markets.

Simultaneously, the 65–89 age group exhibited a notable increase from 4.2% to 5.8%, indicating a growing tendency for post-retirement age employment. This 2% increase, while smaller in absolute terms, represents a significant relative change in labor market participation among the oldest workforce segments. These findings support Shin et al. (2024) observations about the changing nature of retirement transitions in developed economies.

Tab. 3: Employment rate by age (%)

Age groups (years)	2021				2022				2023				2024				2025
	1.Q	2.Q	3.Q	4.Q	1.Q	2.Q	3.Q	4.Q	1.Q	2.Q	3.Q	4.Q	1.Q	2.Q	3.Q	4.Q	1.Q
15–24	20.5	19.8	21.2	21.7	19.7	21.7	22.3	21.7	21.6	21.8	21.6	21.7	21.0	20.9	22.5	22.6	22.5
25–49	81.0	82.7	84.1	84.2	84.2	85.0	85.0	84.9	84.4	85.0	84.4	85.1	85.4	86.0	85.0	86.1	85.4
50–64	66.8	67.2	68.9	70.3	70.1	70.5	71.0	72.1	71.4	72.4	73.4	74.8	72.6	73.1	73.4	74.1	73.3
65–89	4.2	4.1	4.3	4.8	4.5	4.7	5.1	5.1	4.8	5.3	5.9	5.9	5.8	5.8	6.5	6.5	6.2

Source: own based on DataCube (Statistical Office of the Slovak Republic, 2025)

The prime working age group (25–49) maintained consistently high employment rates around 85%, with a moderate increase of 4.4% over the 1st quarters of the study period. However, the most dynamic changes occurred in the older age segments, suggesting successful implementation of age-inclusive workplace policies. This trend corresponds with Waligóra (2024) research on effective age management practices in European organizations.

The observed employment patterns indicate a structural shift in Slovak workforce demographics, characterized by increased participation of older workers. This transformation aligns with Cowen et al. (2023) findings on emerging labor

market trends in Eastern European countries. The data suggests that organizational strategies supporting active aging are gaining traction, note that continued policy support remains crucial for sustaining this positive trajectory.

By analyzing existing data, we attempted to develop a forecast for the number of employed individuals in the 55+ age group. We compared several analytical methods: trend analysis using a linear model with dummy variables (MAE = 6.52), exponential smoothing using Winters' additive model (MAE = 3.77), and Box-Jenkins methodology using SARIMA (0,1,0) (0,1,0) (MAE = 5.8). The best model fit was achieved using Winters' additive

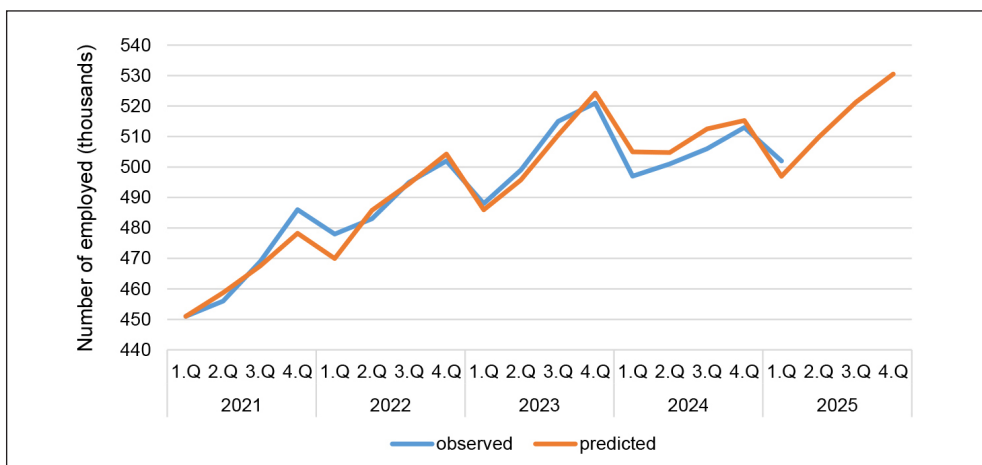


Fig. 3: Number of employed aged 55+ (2021–Q1/2025 with forecast)

Source: own based on DataCube (Statistical Office of the Slovak Republic, 2025)

exponential smoothing model. The data in Fig. 3 clearly show that the positive trend in employment growth in the 55+ age group in Slovakia will continue in the coming periods. With 95% confidence, we can expect the number of employed people aged 55+ to be: Q2/2025: 499,130–520,380; Q3/2025: 506,240–536,280; and Q4/2025: 512,110–548,900.

These employment trends provide empirical evidence supporting the effectiveness of Slovakia's active aging initiatives and suggest positive developments in organizational age management implementation. The findings have significant implications for future policy development and organizational practices in supporting an age-diverse workforce.

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4 Discussion

The findings describe key factors contributing to successful active ageing at work in Slovakia. Among the trends identified based on statistical findings, changes were recorded in post-retirement employment (65–89), where rates increased from 4.2% to 5.8%, representing an increase of 1.6% (Tab. 2). Although this increase appears modest in absolute terms, it represents a significant relative change in labour market participation among the oldest segment of the workforce, which is consistent with observations by Shin et al. (2024) on the evolution of retirement patterns in developed economies. An analysis of the gender distribution in the 55+ age group (Tab. 1) shows persistent employment gaps between men and women, with men maintaining higher employment rates over the period under review. However, both groups experienced positive growth, suggesting that age management initiatives effectively support workforce participation across genders.

Research on successful aging at work emphasizes the importance of proactive strategies and organizational support. Key factors include continuous learning, relationship development, career management, and stress relief (Zacher et al., 2021). The data shows a significant increase in employment rates among older

workers over the observed period (2021–2024). Particularly noteworthy is the substantial rise in the employment rate for the 50–64 age group, which grew by 5.8%, from 6.8% to 72.6% (Tab. 2).

These findings offer empirical evidence of the effectiveness of Slovakia's active aging initiatives and highlight positive developments in the implementation of organizational age management. The employment patterns observed reflect a structural shift in the demographic composition of the Slovak workforce (Tab. 3). This transformation aligns with Eurofound (2024) research on emerging labor market trends in Eastern European countries.

The empirical evidence from Slovak organizations demonstrates effective implementation of active aging initiatives and age management practices. The observed employment patterns indicate a structural transformation in Slovak workforce demographics (Tab. 3), consistent with Eurofound (2024) analysis of Eastern European labor market trends. The interviews with key informants revealed themes that both reflect older workers' experiences with age management initiatives and correspond with established theoretical frameworks in the field. These insights suggest organizations are developing integrated approaches to workplace age diversity.

Participants discussed the dual nature of technological changes in the workplace (technology adaptation in the workplace: challenges and opportunities), acknowledging both the challenges and opportunities these changes present. This theme resonates with the findings of Kooij et al. (2020), who emphasize that successful aging involves maintaining high levels of ability and motivation through self-regulation and a fit between the person and their environment. Technological adaptation is a crucial part of this fit, where older workers must navigate new tools and systems while also maintaining their competence (Draková, 2024).

Participants highlighted workplace flexibility as a critical factor for continued employment (workplace flexibility: a key factor in active age employment), which aligns with research by Zacher (2022), who asserts that a multi-faceted approach is necessary for successful aging at work. Flexible work arrangements are particularly beneficial for older employees, allowing them to balance work with health needs and personal responsibilities. This flexibility

contributes to maintaining motivation and reducing the physical and mental strain of aging in the workforce.

A key insight from the interview with key informants was the desire of elderly workers to share their expertise while feeling valued (knowledge transfer and recognition: the desire to share expertise and feel valued). This reflects the concept of job crafting as described by Kooij (2015), where employees actively shape their jobs to better fit their skills and motivations. The recognition of their contributions is essential to fostering a sense of value, which, according to research by Zacher (2022), can be enhanced through age-friendly organizational practices that acknowledge the experience of older workers.

Participants expressed a strong preference for ongoing learning opportunities (professional development: the value of ongoing learning and specific preferences), which aligns with the findings of Nagarajan et al. (2019), who emphasize the importance of continuous professional development for sustaining an aging workforce. This theme suggests that older workers are not only interested in career continuation but also in keeping their skills up-to-date, which is critical for both personal motivation and organizational success.

The percentage of people aged 50 to 74 who stated that they received education or training in the four weeks preceding the survey increased in Slovakia from 1.4% in 2011 to 5.2% in 2023. The number of graduates of Third Age Universities at higher education institutions increased from 1,271 to 1,597 in that period and in 2023, the number of people studying at Third Age Universities in Slovakia was 6,559 (Statistical Office of the Slovak Republic, 2025).

The participants underscored the need for health-conscious workplace adaptations, which ties directly into the broader discussion on health and institutional factors affecting successful aging (health and wellbeing support: the importance of health-conscious workplace adaptations). According to Štalmachová and Strenitzerová (2019), in Slovakia, the aging workforce necessitates policies that integrate health considerations and promote well-being. Health support is vital for maintaining productivity and engagement in the workforce.

The desire for extended careers, provided proper support is available, was a common

sentiment among participants (career continuation: interest in extended careers with proper support). This aligns with the notion of aging successfully at work, which, as Zacher (2022) suggests, requires both individual strategies and organizational support. When employers provide the right resources and support systems, older workers are more likely to remain engaged and productive beyond the typical retirement age.

In conclusion, the findings from the interview with key informant discussions are consistent with existing research in the field of aging and workforce participation. The integration of technology, flexibility, recognition, professional development, health support, and career continuation are all vital components of effective age management strategies. These findings underscore the importance of adopting a holistic approach that addresses both the individual needs of older workers and the organizational practices that support their continued engagement in the workforce.

4.1 Scandinavian best practices – Comparative insights

The findings gain additional significance when compared with Scandinavian age management models, which are widely recognized as leading examples of successful workforce aging adaptation. While Slovak organizations show positive development in older worker integration, several key lessons emerge from Scandinavian practices that merit discussion.

In 2018, the Swedish government appointed the Delegation for the Senior Workforce (Delegationen för Senior Arbetskraft), which was tasked with “promoting, firstly, older workers’ rights and combating ageism in the labour market and, secondly, the use of older workers’ skills and opportunities for upskilling (Eurofound, 2025). Swedish organizations’ approach to flexible retirement, particularly the “80-90-100” model (Brink, 2023), offers valuable insights for Slovak implementation. Under this system, older workers can reduce their working time to 80% while retaining 90% of their salary and 100% of their pension contributions. Our findings regarding workplace flexibility align with this model’s success, though Slovak organizations typically implement less formalized arrangements. The Swedish example suggests that institutionalizing such flexibility through formal policies could enhance outcomes in the Slovak context.

Second, the Norwegian Inclusive Workplace Agreement demonstrates the effectiveness of tripartite cooperation between employers, employees, and government institutions (Hasting et al., 2024). This approach has achieved remarkable results, with Norway maintaining employment rates above 80% for workers aged 55–64. Comparing this to our findings, where Slovak employment rates for similar age groups reached 72.6%, suggests potential benefits of stronger institutional coordination in age management implementation.

In Denmark, social agreements entitle workers employed by the municipality or at the regional level to additional free time and a part of social agreements, known as senior days (Eurofound, 2025). In recognition of the fact that perceptions about the ability of older workers to adapt to new situations can contribute to discrimination in recruitment, the Ministry for Children and Social Affairs in Denmark supported a social campaign in 2019 that aimed to highlight the contribution of workers aged 50+ to the labour market (Eurofound, 2025). In Finland, the Occupational Safety and Health Act was modified to better account for older workers and to promote their careers. The amended act entered into force in June 2023 (Eurofound, 2025). Finland's comprehensive approach to work ability maintenance ("työkykyä ylläpitävä toiminta") provides important insights for health and well-being support. The Finnish model emphasizes preventive occupational health services and continuous workplace adaptation (Ilmarinen 2012), aspects that emerged as crucial in our interview with key informant findings but are less systematically implemented in Slovak organizations.

These comparisons suggest several opportunities for enhancing Slovak age management practices:

- i) Development of more formalized flexible work policies following the Swedish model;
- ii) Strengthening tripartite cooperation as demonstrated in Norway;
- iii) Implementation of comprehensive work ability maintenance programs based on Finnish experiences.

Scandinavian countries demonstrate relatively progressive approaches to older worker employment, with flexible retirement systems, good working conditions, and supportive cultural attitudes toward extended working lives (Eurofound, 2025). The success of these

Scandinavian approaches suggests that while Slovak organizations are moving in the right direction, there remains significant potential for further development through adaptation of proven practices from Northern Europe.

4.2 Limitations and future research

The key informant interviews utilized semi-structured questions to gather detailed perspectives on age management implementation. The study's methodological strength derived from researcher triangulation across multiple disciplines and established analytical procedures following Malterud's (2012) systematic text condensation approach. While the study achieved diversity across regions, sectors and age groups, a limitation was that all informants held senior strategic positions. Their organizational roles may have led to more formalized rather than operational insights. Future research would benefit from including perspectives across different hierarchical levels to capture more diverse workplace experiences.

Conclusions

The examination of age management implementation in Slovak organizations (2021–2024) revealed significant progress in supporting older workers' employment while identifying areas for development. Recent research on age management implementation in Slovak organizations reveals significant progress in supporting older workers' employment, with key success factors including flexible work arrangements, structured knowledge transfer programs, and technological training (Vražňáková & Stareček, 2022). Our analysis demonstrated key success factors through quantitative evidence of increased older worker participation and qualitative insights highlighting adequate flexible work arrangements, structured knowledge transfer programs, and technological training. The empirical evidence demonstrates effective implementation of active aging initiatives, with the 50–64 age group experiencing a 5.8% increase in employment rates (from 66.8% to 72.6%) and post-retirement employment (65–89) rising from 4.2% to 5.8%. These employment patterns indicate a structural transformation in Slovak workforce demographics, consistent with emerging labor market trends in Eastern European countries. Bidirectional mentoring relationships proved valuable, combining older workers' expertise with younger

colleagues' technological proficiency, though challenges persisted in gender employment disparities and technology adoption.

The qualitative analysis revealed that participants emphasized workplace flexibility as critical for continued employment, the importance of knowledge transfer and recognition, strong preferences for ongoing learning opportunities, and the need for health-conscious workplace adaptations. Organizations implementing comprehensive age management strategies demonstrated improved workforce retention among older employees, with participants expressing interest in extended careers when proper organizational support is available. Organizations must prioritize enhanced technology training approaches, refined flexible work policies, and structured knowledge transfer programs to advance age management implementation. This requires developing comprehensive strategies addressing both immediate workplace needs and long-term workforce sustainability. While focused on Slovakia, the findings provide insights for age management implementation across post-transition economies, particularly regarding technological adaptation, knowledge retention, and workplace flexibility. The research demonstrates that successful age management requires an integrated approach aligning organizational capabilities with individual worker needs while fostering an age-inclusive workplace culture valuing diverse generational contributions (Debelak et al., 2023).

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References

- Al-Monawer, F. A. (2024). Analyzing the relationship between workplace diversity and innovation and its influence on organizational performance. *Journal of System and Management Sciences*, 14(1), 471–489. <https://doi.org/10.33168/JSMS.2024.0127>
- Bayl-Smith, P. (2021). Age discrimination in the workplace. In D. Gu & M. E. Dupre (Eds), *Encyclopedia of gerontology and population aging* (pp. 110–114). Springer International Publishing. https://doi.org/10.1007/978-3-030-22009-9_582
- Bozkus, K. (2024). Organizational culture change and technology: Navigating the digital transformation. In M. Sarfraz & W. U. H. Shah (Eds), *Business, management and economics* (Vol. 16). IntechOpen. <https://doi.org/10.5772/intechopen.112903>
- Brink, S. (2023). Societal choices enhance the longevity dividend. In *The longevity dividend* (Vol. 39, pp. 135–160). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-35335-2_7
- Budhwar, P., Chowdhury, S., Wood, G., Aguinis, H., Farndale, E., Kim, S. H., McDonnell, A., Scullion, H., Srivastava, M., & Yan, M. (2023). Human resource management in the age of generative artificial intelligence: Perspectives and research directions on ChatGPT. *Human Resource Management Journal*, 33(3), 606–659. <https://doi.org/10.1111/1748-8583.12524>
- Cowen, A. P., Rink, F., Cuypers, I. R. P., Grégoire, D. A., & Weller, I. (2022). Applying Coleman's boat in management research: Opportunities and challenges in bridging macro and micro theory. *Academy of Management Journal*, 65(1), 1–10. <https://doi.org/10.5465/amj.2022.4001>
- Cristea, M., Noja, G. G., Stefea, P., & Sala, A. L. (2020). The impact of population aging and public health support on EU labor markets. *International Journal of Environmental Research and Public Health*, 17(4), 1439. <https://doi.org/10.3390/ijerph17041439>
- Debelak, K., Grah, B., & Penger, S. (2023). Ageing workforce's impact on modern organizations: How to extend working lives? *ENTRENOVA – ENTERPRISE RESEARCH INNOVATION*, 9(1), 166–180. <https://doi.org/10.54820/entrenova-2023-0016>
- Debelak, K., Penger, S., & Grah, B. (2024). Successful aging at work: A comprehensive literature review. *ENTRENOVA – ENTERPRISE RESEARCH INNOVATION*, 10(1), 191–203. <https://doi.org/10.54820/entrenova-2024-0017>
- Draková, Z. (2024). Adaptability of seniors to modern technologies: Identifying barriers. *Young Science*, 12(4), 322–329.
- Eppler-Hattab, R., Meshoulam, I., & Doron, I. (2019). Conceptualizing age-friendliness in workplaces: Proposing a new multidimensional model. *The Gerontologist*, 60(1), 12–21. <https://doi.org/10.1093/geront/gny184>
- Eurofound. (2024). *The changing structure of employment in the EU: Annual review 2023* [Eurofund research paper]. Publications

- Office of the European Union. <https://doi.org/10.2806/906320>
- Eurofound. (2025). *Keeping older workers in the labour force: Working conditions and sustainable work* [Report]. Publications Office of the European Union. <https://www.eurofound.europa.eu/sites/default/files/2025-03/ef24029en.pdf>
- Eurostat. (2023). *Ageing Europe – Statistics on population developments*. Publications Office of the European Union.
- Getzmann, S., Reiser, J. E., Gajewski, P. D., Schneider, D., Karthaus, M., & Wascher, E. (2023). Cognitive aging at work and in daily life – A narrative review on challenges due to age-related changes in central cognitive functions. *Frontiers in Psychology, 14*, 1232344. <https://doi.org/10.3389/fpsyg.2023.1232344>
- Hasting, R. L., Hoff, R., Merkus, S. L., Gran, J. M., & Mehlum, I. S. (2024). Effect of the Norwegian agreement on a more inclusive working life on use of sick leave and pregnancy benefits among pregnant women: A cohort study. *BMC Public Health, 24*(1), 3536. <https://doi.org/10.1186/s12889-024-20933-8>
- Hertel, G., van der Heijden, B. I., de Lange, A. H., & Deller, J. (2013). Facilitating age diversity in organizations – Part I: Challenging popular misbeliefs. *Journal of Managerial Psychology, 28*(7/8), 729–740. <https://doi.org/10.1108/jmp-07-2013-0233>
- Ilmarinen, J. E. (2012). *Promoting active ageing in the workplace*. European Agency for Safety and Health at Work.
- Irwin, T., Tonkinwise, C., & Kossoff, G. (2020). Transition design: An educational framework for advancing the study and design of sustainable transitions. *Cuadernos del Centro de Estudios de Diseño y Comunicación, 105*(105). <https://doi.org/10.18682/cdc.vi105.4188>
- Jotabá, M. N., Fernandes, C. I., Gunkel, M., & Kraus, S. (2022). Innovation and human resource management: A systematic literature review. *European Journal of Innovation Management, 25*(6), 1–18. <https://doi.org/10.1108/EJIM-07-2021-0330>
- Kooij, D. T. A. M. (2015). Successful aging at work: The active role of employees. *Work, Aging and Retirement, 1*(4), 309–319. <https://doi.org/10.1093/workar/wav018>
- Kooij, D. T. A. M., Zacher, H., Wang, M., & Heckhausen, J. (2020). Successful aging at work: A process model to guide future research and practice. *Industrial and Organizational Psychology, 13*(3), 345–365. <https://doi.org/10.1017/iop.2020.1>
- Malterud, K. (2012). Systematic text condensation: A strategy for qualitative analysis. *Scandinavian Journal of Public Health, 40*(8), 795–805. <https://doi.org/10.1177/1403494812465030>
- Marshall, C., Rossman, G. B., & Blanco, G. L. (2022). *Designing qualitative research* (7th ed.). SAGE.
- Mertens, D. M. (2023). *Mixed methods research: Research methods* (1st ed.). Bloomsbury Academic. <https://doi.org/10.5040/9781350273191>
- Ministry of Labour, Social Affairs and Family of the Slovak Republic. (2021). *National program for active aging 2021–2030*. MLSAF SR.
- Nagarajan, N. R., Wada, M., Fang, M. L., & Sixsmith, A. (2019). Defining organizational contributions to sustaining an ageing workforce: A bibliometric review. *European Journal of Ageing, 16*(3), 337–361. <https://doi.org/10.1007/s10433-019-00499-w>
- Nikou, S., De Reuver, M., & Mahboob Kanafi, M. (2022). Workplace literacy skills – How information and digital literacy affect adoption of digital technology. *Journal of Documentation, 78*(7), 371–391. <https://doi.org/10.1108/JD-12-2021-0241>
- Okatta, C., Ajayi, F., & Olawale, O. (2024). Enhancing organizational performance through diversity and inclusion initiatives: A meta-analysis. *International Journal of Applied Research in Social Sciences, 6*(4), 734–758. <https://doi.org/10.51594/ijarss.v6i4.1065>
- Pahwa, M., Cavanagh, A., & Vanstone, M. (2023). Key informants in applied qualitative health research. *Qualitative Health Research, 33*(14), 1251–1261. <https://doi.org/10.1177/10497323231198796>
- Pelech, P., & Dědková, J. (2024). An examination of generational differences in the sharing economy: Understanding the motivations of idle asset owners and their impact on peer-to-peer platform management. *Organizacija, 57*(4), 319–332. <https://doi.org/10.2478/orga-2024-0023>
- Shin, O., Park, S., Kim, B., & Wu, C.-F. (2024). Retirement transition sequences and well-being among older workers focusing on gender differences. *Journal of Gerontological Social Work, 68*(4), 415–445. <https://doi.org/10.1080/01634372.2024.2413880>
- Štalmachová, K., & Strenitzerová, M. (2019). Analýza trhu práce SR v kontexte age

managementu a predpoklady jeho ďalšieho vývoja [Analysis of the labor market in the context of age management and assumptions of its further development]. *Pošta, Telekomunikácie a Elektronický Obchod*, 14(2), 63–69 (in Slovak). <https://doi.org/10.26552/pte.C.2019.2.8>

Statistical Office of the Slovak Republic. (2024). *DataCube database* [Dataset pr2019qs]. https://datacube.statistics.sk/#!/view/sk/VBD_SLOVSTAT/pr2019qs/v_pr2019qs_00_00_00_sk

Statistical Office of the Slovak Republic. (2025). *DataCube database* [Dataset as1013rs]. https://datacube.statistics.sk/#!/view/sk/VBD_SK_WIN/as1013rs/v_as1013rs_00_00_00_00_sk

Vraňaková, N., & Stareček, A. (2022). Age management as a challenge in sustainable human resource management and its implementation in Slovakia. *International Journal of Business and Applied Social Science*, 53–61. <https://doi.org/10.33642/ijbass.v8n3p5>

Waligóra, Ł. (2024). *Employees' age diversity – Between supportive workplaces and*

organizational outcomes. Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach. <https://doi.org/10.22367/uekat.9788378759119>

Walker, A., & Maltby, T. (2012). Active ageing: A strategic policy solution to demographic ageing in the European Union. *International Journal of Social Welfare*, 21(s1). <https://doi.org/10.1111/j.1468-2397.2012.00871.x>

Zacher, H., & Rudolph, C. W. (2017). Successful aging at work and beyond: A review and critical perspective. In *Age diversity in the workplace* (pp. 35–64). Emerald Publishing Limited. <https://doi.org/10.1108/s1877-636120170000017004>

Zacher, H., & Rudolph, C. W. (2022). *Age and work: Advances in theory, methods, and practice* (1st ed.). Routledge. <https://doi.org/10.4324/9781003089674>

Zacher, H., Sagha Zadeh, R., Heckhausen, J., & Oettingen, G. (2021). Motivation and healthy aging at work. *The Journals of Gerontology: Series B*, 76(Supplement_2), 145–156. <https://doi.org/10.1093/geronb/gbab042>