



## **SILVER ECONOMY AS A NEW DIMENSION OF THE LABOUR MARKET OF THE SLOVAK REPUBLIC**

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### **Abstract**

The silver economy represents a new dimension of the labour market of the Slovak Republic, responding to demographic population ageing and changes in the age structure of the workforce. While traditional approaches to the labour market focused on a linear model of employment, current trends require flexible strategies integrating active ageing, age management, and intergenerational cooperation. This article analyses the theoretical and empirical foundations of the silver economy, identifies its economic, social, and organisational potential, and evaluates implications for strategic human resource management. A systematic literature review and bibliometric analysis of publications from the Web of Science database (2010–2024) confirmed that the silver economy represents a complex ecosystem encompassing products, services, innovations, and the participation of older workers in the labour market. The research highlights the importance of age management as a tool for optimising the work potential of the older population, supporting an inclusive working environment, and stimulating economic growth. The analysis also points to the need for coordinated public policies, flexible organisational strategies, and interdisciplinary approaches that will enable the effective utilisation of the potential of an ageing society. The silver economy can thus transform Slovakia's demographic challenges into economic and social capital, becoming a key component of the longevity economy and the sustainable development of the labour market.

**KEY WORDS:** silver economy, ageing workforce, labour market, active ageing, age management

**JEL classification:** J14, J21, J24, M12

### **Introduction**

Age transformation of the population is one of the most fundamental phenomena shaping society in the 21st century. European economies, including the Slovak Republic, are entering an era in which the long-term increase in life expectancy and declining fertility rates are fundamentally changing the population structure. This development has complex consequences – ranging from changes in consumer behaviour, through the transformation of social security systems, to adjustments in economic strategies and labour market policies (Bloom, Canning & Fink, 2011; Harper, 2023). According to Eurostat forecasts (2023), by 2050 more than one third of the population in the European Union will be over the age of 55, while the number of people of working age will decline significantly. This trend represents a serious challenge to the sustainability of public finances, pension systems, and the overall performance of labour markets. Demographic ageing is therefore not only a social phenomenon but also an economic challenge that requires new approaches to human resource management and to defining labour productivity in a changing age profile of society (Walker, 2021). In this context, increasing attention has been paid over the past decade to the concept of the silver economy. This term refers to a set of economic activities, products, and services focused on the needs of the older population, as well as a broader framework of economic participation of people in advanced age. The silver economy thus represents not only a consumer segment but also a space for new investment and

innovation opportunities that can contribute to economic growth and social sustainability (Walker & Maltby, 2012; Naegele & Bäcker, 2019). According to the OECD (2019), the annual volume of “silver consumption” in the European Union is estimated at more than EUR 3 trillion, demonstrating that the older population is becoming a key factor of economic development. At the same time, however, it is increasingly evident that the ageing workforce poses a major challenge for organisations. Many enterprises face the retirement of skilled workers, a shortage of young employees, and a low rate of generational renewal. Older workers are often perceived as less flexible, slower to adapt to technological change, and may face age-based discrimination (Ilmarinen, 2012). These stereotypes, however, are not always justified – research confirms that older employees contribute to team stability, show higher levels of loyalty, and are able to effectively share knowledge with younger colleagues (Walker & Maltby, 2012). Therefore, modern HR management increasingly emphasises the need to implement age management – a system that makes it possible to take into account the different needs of workers across age groups. Age management includes not only the promotion of active ageing, but also the creation of appropriate working conditions, the development of lifelong learning, and the creation of opportunities for intergenerational cooperation. These approaches increase the employability of older workers and contribute to sustainable human resource management in an ageing society. The concept of the silver economy thus becomes an integral part of

economic discourse, with its importance extending beyond the framework of social policy (Ren, 2023). In the context of the labour market, it represents an opportunity for the development of new forms of employment, entrepreneurship, and innovation that reflect the changing age structure of the population. As Harper (2023) emphasises, a society with longer life expectancy also requires a paradigm shift in the understanding of productivity and the working life cycle – from a linear model (education–work–retirement) to a cyclical model that integrates education, reskilling, and work activity throughout the entire life course. In the case of the Slovak Republic, these trends are even more pronounced due to the combination of low fertility rates and the emigration of young people abroad. These factors lead to a reduction in labour potential and increase pressure on the adaptation of organisations and public policies alike. The Slovak labour market therefore faces a dual challenge – the ageing of the workforce and, at the same time, a shortage of qualified young workers. Addressing this situation requires strategic planning at both the state and enterprise levels, which will support the active participation of older workers, their reskilling, and the utilisation of the potential of intergenerational cooperation.

From this perspective, the silver economy has the potential to become not only a social but also an economic strategy. Its success depends on the ability of institutions and employers to adapt to demographic reality and to develop policies that support an inclusive working environment. As noted by the OECD (2020) and the European Commission (2021), the promotion of longer working lives, the improvement of working conditions, and flexible forms of employment are key factors in maintaining competitiveness in an ageing society.

The aim of this article is therefore to analyse the position of the silver economy as a new dimension of the labour market of the Slovak Republic and to identify its main implications for strategic human resource management. The study is based on current theoretical insights and empirical findings, placing particular emphasis on the practical aspects of applying age management, supporting active ageing, and developing intergenerational strategies within organisations.

Despite the growing interest in the silver economy and age management, there is still a lack of comprehensive studies that integrate macroeconomic, managerial, and socio-cultural perspectives for the Slovak labour market. In particular, empirical analyses examining the practical impacts of age management and the participation of older workers on workforce sustainability and economic growth in the Slovak Republic are missing. The research gap in the field of the silver economy and the labour market of the Slovak Republic arises from:

1. Lack of empirical studies at the national level: Most research on the silver economy focuses on an international or European context, while specific data and analyses for Slovakia are limited. There is a lack of systematic evaluation of the impact of an ageing population on the Slovak labour market and the effectiveness of age management in Slovak companies.

2. Interdisciplinary integration: Existing studies often examine either the economic or social aspects of the silver economy, but pay less attention to a combined perspective that links macroeconomic analysis, HR strategies, social inclusion, and technological innovation.

3. Practical implementation frameworks: Although theoretical models of age management and the longevity economy are well developed, practical recommendations and “best practices” for Slovak enterprises and public institutions that would enable the adaptation of an older workforce are lacking.

4. Impact of legislation and policies: There is a lack of research examining how existing or planned public policies and legal frameworks support or hinder the development of the silver economy in Slovakia.

5. Financial and social barriers of seniors: Deeper studies on the socio-economic situation of Slovak seniors, their work motivation, access to reskilling opportunities, and barriers to sustainable participation in the labour market are missing.

## Literature review

Research into the phenomenon of the silver economy has, over recent decades, evolved into a multidisciplinary field that connects economic, managerial, and sociological perspectives on population ageing. While earlier works from the 1990s perceived demographic ageing primarily as a social problem and a fiscal burden, contemporary research interprets it as a transformative process and a potential source of economic growth, innovation, and labour market renewal (Harper, 2023; OECD, 2020). This shift in understanding reflects a broader change in how societies approach the relationship between longevity, productivity, and human capital development. Different research streams offer distinct yet complementary frameworks for understanding the dynamics of an ageing economy. Economic theories focus on the macroeconomic consequences of demographic change – their impact on growth, consumption, and the sustainability of public finances (Bloom, Canning & Fink, 2011). Managerial and organisational approaches examine the micro level, that is, the effects of workforce ageing on human resource management, leadership, and corporate culture (Ilmarinen, 2012; Walker & Maltby, 2012). In contrast, sociological and anthropological theories broaden the discussion to include dimensions of identity, social participation, and intergenerational solidarity (Laslett, 1991; Phillipson, 2013).

In recent years, an interdisciplinary approach has increasingly gained prominence, seeking to link these perspectives into a unified framework of sustainable demographic adaptation (Naegle & Bäcker, 2019; European Commission, 2021). This integrated view emphasises that the silver economy is not merely an economic concept, but a complex societal transformation that requires the coordination of public policies, the labour market, and organisational strategies.

The following sections therefore summarise four main scientific schools and their approaches to the issue

of the silver economy – economic, managerial-organisational, sociological, and integrated – highlighting their theoretical foundations, key representatives, and principal concepts.

1. **Economic school (macroeconomic and political-economy interpretations).** This research school is based on a macroeconomic and structural framework in which the silver economy is interpreted as a new source of economic expansion and social stability in the context of demographic ageing. Theoretically, it draws on the tradition of human capital theory (Becker, 1964) and endogenous growth theory, which emphasise investment in education, health, and active ageing as determinants of long-term development.

Researchers within this school analyse the relationship between demographic structure, labour productivity, and public expenditure, pointing to the need to transform fiscal and social systems. The concept of productive ageing (Walker, 2021) is understood here as an economic model that transforms population ageing from a passive burden into an active factor of growth.

This approach represents a macroeconomic and structural research framework that focuses on the interconnections between demographic trends, economic growth, and socio-economic policies. The fundamental premise of this school is that population ageing is not only a demographic phenomenon, but also a systemic factor influencing economic performance, labour productivity, and the sustainability of public finances. It builds on human capital theory (Becker, 1964), according to which investments in education, health, and work ability are a key source of long-term growth, and on endogenous growth theory, which highlights the importance of innovation and knowledge for economic dynamism.

In the context of the silver economy, this approach interprets population ageing as a potential for the so-called longevity dividend – a form of demographic dividend that arises from the effective involvement of the older generation in the labour market and social life. Key concepts such as active ageing, productive ageing, and the social inclusion of older adults reflect efforts to overcome a passive understanding of old age and to integrate it into economic models as an active factor of growth and innovation.

From a methodological perspective, this school relies primarily on macroeconomic modelling, comparative analyses, and projections of demographic trends, which make it possible to assess the impact of ageing on productivity, public expenditure, and economic stability. The aim of such an approach is to identify long-term linkages between demography and economic development and to formulate public policies that support inclusive and sustainable economic growth in an era of population ageing.

2. **Managerial-organisational school (HR management and age management).** This school focuses on the microeconomic and organisational level, examining how population ageing affects personnel strategies, organisational culture, and work motivation. It is grounded in the paradigm of strategic human resource management and the behavioural economics of

labour, which analyse employee adaptability and the need for flexible forms of work.

At the core of this approach is the concept of age management, which integrates principles of inclusive management, lifelong learning, and intergenerational knowledge transfer (Ilmarinen, 2012; Walker & Maltby, 2012). These approaches emphasise that the ability of organisations to maintain the work ability of older employees is a fundamental prerequisite for competitiveness in the era of digitalisation and Industry 4.0 (Schuller, 2017).

This approach represents a microeconomic, behavioural, and organisational perspective that examines the consequences of population ageing at the level of enterprises and institutions. Its core belief is that demographic changes represent not only a challenge for the labour market, but also an impetus for strategic transformation in the field of human resource management. The key theoretical foundations of this school are organisational learning theory and the work ability concept, which emphasises the need to maintain a balance between job demands and the individual capabilities of workers throughout the entire life cycle (Ilmarinen, 2012).

Within this approach, the age management paradigm is developed, based on the principles of inclusive management, lifelong learning, and intergenerational knowledge transfer. The aim is to support the sustainable employability of older workers, increase their adaptability to technological changes, and at the same time prevent the loss of qualifications due to premature exit from the labour market (Walker & Maltby, 2012). Concepts such as lifelong learning, inclusive leadership, and intergenerational knowledge transfer are in this context considered strategic tools for strengthening organisational competitiveness and workforce stability in the era of digitalisation and Industry 4.0 (Taylor & Earl, 2016; Schuller, 2017).

From a methodological perspective, the managerial-organisational school is oriented towards qualitative research on organisational processes, case studies, and HR diagnostics, which make it possible to identify barriers and opportunities associated with workforce ageing. This approach places emphasis on the empirical verification of strategies aimed at maintaining work ability, supporting intergenerational cooperation, and developing corporate cultures that take age diversity into account. The goal is to create an environment in which older workers become active carriers of knowledge, stability, and continuity of organisational development.

3. **Sociological-anthropological school (social and cultural dimension of the silver economy).** This approach is rooted in traditional social gerontology and the anthropology of ageing, which understand ageing as a cultural and social process shaping the identity, values, and life strategies of the older population. Researchers such as Laslett (1991) and Phillipson (2013) developed the concept of the so-called third age – a life stage following exit from the labour market in which individuals actively engage in social, cultural, and civic life.

The modern orientation of this school emphasises that the economic activity of older people has not only material, but also symbolic and social significance (Walker, 2021). The paradigm of active ageing is here understood as a form of social participation and meaningful living, rather than merely as an extension of working life.

This approach represents a socio-cultural and humanistic research framework that analyses population ageing as a complex social phenomenon extending beyond the economic and labour dimension. It draws on the tradition of social gerontology and the anthropology of ageing, which understand old age not as a passive period of decline, but as a socially constructed life stage associated with new forms of identity, participation, and cultural value (Laslett, 1991; Phillipson, 2013). The fundamental theoretical starting point here is the concept of the so-called third age, which defines the period after exit from the labour market as a phase of active self-realisation, education, and social contribution of the individual.

The sociological-anthropological school emphasises that the economic activity of the older generation also has symbolic and cultural significance – it reflects a shift in the understanding of the value of work, solidarity, and intergenerational relationships. Walker (2021) points out that the concept of active ageing should not be reduced solely to economic participation, but should be perceived as a process of social inclusion, mutual care, and intergenerational dialogue. This approach also raises the issue of the quality of life of older people, which is determined not only by material security, but also by a sense of meaningfulness, recognition, and social belonging.

From a methodological perspective, this strand relies primarily on qualitative research methods, such as ethnographic studies, in-depth interviews, and surveys of seniors' value orientations. These approaches make it possible to capture subjective experiences, attitudes, and cultural representations of ageing that quantitative models often overlook. The findings of research within this school contribute to the reassessment of the social position of older people and to the shaping of inclusive ageing policies that emphasise dignity, participation, and meaningful social inclusion in later stages of life.

**4. Integrated and interdisciplinary school (linking macro- and micro-levels).** The integrated school represents a synthesis of economic, managerial, and social perspectives, striving to create a comprehensive model of sustainable demographic adaptation. Scholars such as Naegele (2022), Harper (2023), and the OECD (2019) emphasise the need for a coordinated societal response to population ageing through the interconnection of public policies, the labour market, educational institutions, and the private sector.

At its core is the paradigm of the longevity economy, which interprets longer life as a source of innovation, economic stability, and social cohesion (European Commission, 2021). This approach transcends traditional dichotomies between economic efficiency and social inclusion and promotes multidisciplinary

solutions based on cross-sectoral cooperation and long-term sustainability.

This approach represents a synthesis of economic, managerial, and sociological perspectives and seeks to create a holistic framework for understanding and managing demographic change. It is grounded in the belief that the process of population ageing cannot be explained or addressed within a single discipline – it requires a coordinated integration of knowledge from economics, sociology, demography, public policy, and management. Proponents of this school (e.g. Naegele, 2022; Harper, 2023; OECD, 2019) emphasise the need to link the macro level of public policies with the micro level of organisations and individuals, thereby giving rise to a new concept of sustainable management of an ageing society.

The foundation of this approach is the paradigm of the “longevity economy”, which interprets the extension of human life as an economic, social, and innovative potential. A longer life cycle creates new opportunities for the labour market, healthcare, education, and the technological sector, while requiring a shift in approaches to employment and social security (European Commission, 2021). From this perspective, ageing is understood not as a problem, but as a driving force of economic transformation that can support value creation, innovation growth, and the development of new markets focused on the needs of the older population.

The integrated approach also emphasises systemic cooperation between sectors – linking economic strategies with policies of social inclusion, education, and healthcare. This framework promotes the concept of sustainable workforce development, which supports a balance between efficiency and social justice, as well as cross-sector cooperation among the state, businesses, and civil society. At the same time, it highlights the need to build resilient ageing societies, that is, societies capable of adapting to demographic change through long-term planning, education, and innovation.

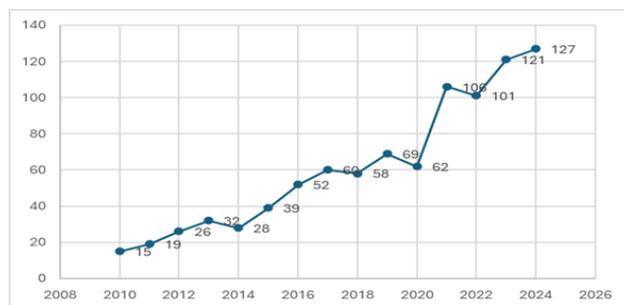
Methodologically, this approach relies on systems modelling, comparative analyses, and strategic foresight studies, which make it possible to anticipate future consequences of demographic trends and to design multi-level policies. The goal of the integrated framework is to create a sustainable workforce development model that is simultaneously economically viable, socially inclusive, and culturally adaptable. In this way, the interdisciplinary school becomes the foundation for a modern paradigm of the silver economy, which combines economic efficiency with quality of life in an ageing society.

## Methodology

The aim of the methodological section is to clarify the procedure through which the research on the issue of the silver economy as a new dimension of the labour market of the Slovak Republic was conducted. As the article has the character of a scientific literature review, the methodological framework focuses on the systematic analysis and synthesis of scientific knowledge from domestic and international sources.

The chosen approach is based on the principles of qualitative secondary research, specifically the method of a systematic literature review. The aim was to identify, analyse, and compare theoretical approaches, models, and empirical findings related to the development of the silver economy, demographic ageing, and their impact on the labour market and human resource management. The review methodology was grounded in the PRISMA framework (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), which ensures transparency and replicability of the research process. This approach enables not only the synthesis of existing knowledge, but also the identification of research gaps and perspectives for further research.

For the selection of relevant literature, the Web of Science database was chosen and limited to the years 2010–2024, as this period represents a phase of intensive technological development across various sectors, including the labour market, making it a relevant time frame for analysing current trends and impacts. The growing number of publications illustrated in Figure 1 reflects the increasing scientific and practical interest in the issue of the silver economy. This trend indicates that population ageing and its economic consequences are becoming an increasingly important topic for research and policy-making in the areas of the labour market and social security.



**Fig. 1.** Research trend of the “silver economy” in the WoS database in the years 2010–2024

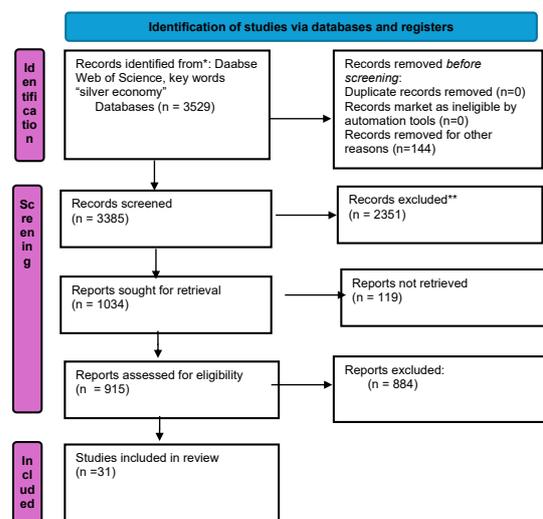
Source: own elaboration

The procedure through which we arrived at the final number of articles is presented in Figure 2, the PRISMA model (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). This model was designed to transparently and systematically report the process of identifying and processing literature reviews. It was developed based on the methodology outlined in other publications (Page et al., 2021; Moher, 2009).

The main database used in this study is Web of Science (WoS) by Clarivate. WoS is a widely used database among researchers due to its extensive coverage of scientific literature across various fields. Using WoS, we filtered contributions in order to ensure a relevant and representative sample. The use of WoS and filtering criteria ensured reliable and relevant sources for our analysis. The data used were collected on 21 November 2025. Figure 2 presents the data collection process according to individual criteria.

The term silver economy appears a total of 3,529 times in the following databases: Web of Science Core

Collection, BIOSIS Citation Index, Current Contents Connect, Data Citation Index, Derwent Innovations Index, Grants Index, KCI-Korean Journal Database, MEDLINE®, ProQuest™ Dissertations & Theses Citation Index, and SciELO Citation Index. It is important to note that the English language is a global language and is generally recognised as the primary language for publishing scholarly contributions. English is the predominant language used in the primary part of the records, with a total of 3,385 studies recorded in this language. As a result of this significant and dominant volume, English became the main language used in the filtering process, while all other languages were excluded. Subsequently, the studies were sorted according to the criteria listed in Figure 2, and a total of 31 studies were included in the final analysis.



**Fig. 2.** PRISMA diagram

Source: own elaboration

We processed a visualisation created using the VOSviewer software, which illustrates the structure and thematic interconnections in research focused on the silver economy. The keyword map reveals several distinct thematic clusters that reflect the multidisciplinary nature of the examined topic. For the purposes of conducting bibliographic analyses, the VOSviewer software was used. VOSviewer is a free software tool for constructing and visualising bibliometric networks from journals or individual publications. Data can be constructed based on citation relationships, bibliographic coupling, co-citation, or co-authorship. The software offers a text mining function that can be used to visualise networks of co-occurrence of important terms from the scientific literature. This software links keywords using association strength (by default). Association strength is used to normalise the strength of links between items (DeGroot, 2023).

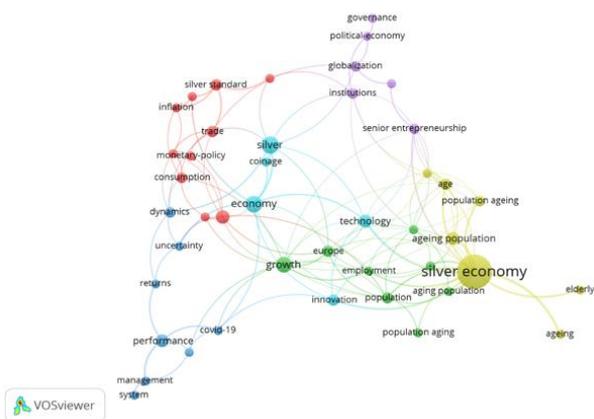
The keyword “silver economy” is closely linked primarily to terms related to demographic trends, technological development, and the economic implications of population ageing. Another cluster (yellow) includes terms such as population aging, ageing population, elderly, and ageing. This linkage represents the demographic foundation of the entire

research field and indicates that the issue of the silver economy is primarily anchored in the study of population ageing. At the same time, there is another linkage (green cluster) that groups terms related to economic growth, innovation, and the labour market (growth, technology, innovation, employment). This connection with the central concept suggests that a significant part of the literature focuses on economic opportunities and the innovation potential arising from an ageing population.

The concept of the silver economy is also associated with economic factors, represented in the figure by terms such as inflation, trade, monetary policy, consumption, and uncertainty (red cluster). This clearly indicates the macroeconomic context within which the silver economy is analysed. The presence of these terms suggests an increased interest in external economic factors influencing the behaviour of older consumers and macroeconomic stability.

At the same time, we observe additional smaller clusters related to performance, management systems, and the impacts of crises (e.g. COVID-19) (blue), as well as clusters focused on governance, institutions, and globalisation (purple). Altogether, these complement the picture of the complexity of this research terrain and underscore that issues of governance, institutional frameworks, and global trends are increasingly being integrated into the discussion of the silver economy.

The visualisation indicates that research on the silver economy is characterised by a high degree of interdisciplinarity. Key concepts are grouped into thematic clusters that connect demographic, technological, economic, and socio-institutional aspects of ageing. This structure supports the interpretation of the silver economy as a dynamically developing field that goes beyond traditional disciplinary boundaries and requires integrated analytical approaches.



**Fig. 3.** Map of keywords  
*Source:* own elaboration

### Limitations

This study is based on a systematic literature review and bibliometric analysis using the Web of Science database and a defined set of search filters (language, document type, publication years, and subject categories). As a result, several limitations should be acknowledged. First, restricting the search to a single

database and primarily to English-language peer-reviewed journal articles may have led to the exclusion of relevant studies published in other databases, books, policy reports, or national publications, including Slovak-language sources that may provide important local context. Second, bibliometric analysis and keyword co-occurrence mapping identify structural relationships and thematic trends in the literature but do not evaluate causal relationships or the practical effectiveness of specific labour-market or HR policies. Third, the selected time period (2010–2024) may underrepresent earlier foundational research on ageing and labour markets. Finally, as a secondary research design based exclusively on existing literature, the study does not include primary empirical data from Slovak organisations or workers. Therefore, the conclusions should be interpreted as a theoretical and conceptual synthesis rather than direct empirical evidence, and further primary research is recommended to validate the findings in the specific context of the Slovak Republic.

### Findings

Among the most cited studies (42 citations) is the study by Rogelj and Bogataj (2019), who focus on population ageing in relation to rising expenditures on healthcare and long-term care in ageing societies. They provide an overview of the social infrastructure of the silver economy and emphasise that the development of infrastructure – healthcare, social, and educational – is a prerequisite for transforming the economy into a “silver-friendly” model. Another study by Wang et al. (2022) focuses on the negative effects of an ageing population and examines the consumer potential of older people. The study by Ren et al. (2023) is closely related to the development of the silver economy, which represents a set of economic activities, products, and services responding to the needs of an ageing population. In the context of China, which has faced rapid demographic ageing in recent decades, the domestic care sector has gained crucial importance as one of the key segments of the silver economy. The rapid growth in demand for senior care services simultaneously reveals structural weaknesses of the sector, particularly a low level of formalisation, high transaction costs, information asymmetry, and fluctuating service quality.

Ogawa et al. (2021) focus on population ageing in Asia, which fundamentally alters the age structure and, consequently, the sources of economic growth, a development that is crucial for age management and the expansion of the silver economy. They note that the first and second demographic dividends previously supported growth through a larger share of the working population and higher savings; however, in rapidly ageing countries (Japan, Korea, Taipei), pressure on public transfers is increasing while the importance of family transfers is declining. The authors introduce a “silver” third dividend, which arises from the utilisation of the labour potential of healthy seniors—this constitutes the core of modern age management. Through calculations, they demonstrate that in Japan this potential can significantly contribute to macroeconomic growth. The study thus confirms that

workplace adaptation for older employees and the development of the silver economy are strategically essential for sustainable growth in ageing societies. Similarly, Heshmati et al. (2019) emphasise that older generations are often particularly vulnerable and that it is important to create working conditions and social policies that support active ageing. The identified inequality factors—technological change, education, globalisation, and labour market reform—indicate that without targeted policies, the older workforce may be pushed to the margins, thereby weakening the potential of the silver economy as well. The text also highlights the need for reforms in taxation, education, and the labour market, which must be designed to support equal opportunities, including those for older employees. Overall, it shows that inclusive growth and effective age management are interlinked conditions for sustainable socio-economic development. In contrast, Barković et al. (2024) conclude that modern seniors are healthier, more active, and possess substantial purchasing power, making them a significant economic force and supporting the dynamic growth of the silver economy. Their study emphasises that global population ageing fundamentally changes demographic structures and the economic environment, creating new challenges and opportunities for age management and the silver economy. Overall, the text demonstrates that supporting silver entrepreneurship and age-friendly policies is key to productively managing demographic change and building a sustainable, inclusive economy.

Research findings on the macroeconomic aspects of the silver economy have expanded significantly over the past decade, with authors increasingly pointing to the transformative nature of demographic ageing for modern economies. Initially, the concept of the silver economy was understood primarily as economic activity related to the consumption of goods and services intended for the older population. Today, however, this concept has shifted towards a comprehensive economic model that also includes the participation of older people in the labour market, the development of innovations, technological solutions, and new forms of social entrepreneurship (Harper, 2023; OECD, 2019).

According to the works of Bloom, Canning, and Fink (2011), population ageing can be interpreted not only as a risk to fiscal sustainability, but also as a driver of economic growth – provided that society is able to effectively utilise the human capital of older generations. In this sense, the concept of the silver economy builds on endogenous growth theory, which emphasises the role of knowledge, experience, and innovation as driving forces of economic productivity.

Within the European context, this concept has gained institutional support through initiatives of the European Commission, particularly the document “Green Paper on Ageing” (2021), which defines the silver economy as a strategic area of social and economic policy. Based on OECD recommendations (2020), several EU Member States are focusing on linking employment policies, social security systems, and lifelong learning in order to support productive ageing and increase the level of economic participation of the population aged 55+.

## Discussion

An analysis of research trends in the field of the silver economy has confirmed that it is a dynamically developing interdisciplinary area that goes beyond the traditional understanding of ageing as exclusively a social or demographic problem. The scientific discourse of the past decade points to a paradigmatic shift from the concept of passive ageing to a model of active, productive, and inclusive ageing, which brings not only social but also economic benefits (Harper, 2023; OECD, 2019).

The discussion within the framework of the four identified theoretical schools – economic, managerial-organisational, sociological-anthropological, and interdisciplinary – has shown that all approaches converge on one key point: population ageing can be transformed into a source of development if it is addressed strategically. From an economic perspective, the silver economy represents potential for faster growth and labour market stabilisation; from a managerial perspective, it creates space for innovation in HR strategies and age management; and from a sociological perspective, it supports a shift in societal attitudes towards old age, intergenerational dialogue, and social cohesion.

By combining these approaches, a new interdisciplinary framework of the longevity economy emerges, which is aligned with the United Nations Sustainable Development Goals (Agenda 2030) and with European Union policies on active ageing and inclusive growth. Within this framework, older people are perceived not as passive recipients of social services, but as active participants in the labour market, consumers, and carriers of innovation, whose experience represents significant economic and cultural value (Walker & Maltby, 2012; Naegel & Bäcker, 2019).

The sources together create a robust picture showing that:

1. **The silver economy is a complex ecosystem** that encompasses services, the labour market, consumption, technologies, and social innovations (Barković Bojanić, 2024; Krzymińska, 2020; Cucculelli, 2023). The development of the silver economy will be one of the expected megatrends of the economy. Activities of the silver industry, social innovations, gerontechnologies, and senior entrepreneurship are prerequisites for improving the standard and quality of life of the older generation. The silver economy can be a significant driver of development if it is based on ethical principles supporting social and economic inclusion, as well as countermeasures against stereotypes, age discrimination, and social exclusion. Age management is a key tool that enables societies to productively integrate the ageing population into the work process. At the same time, the authors emphasise that this issue requires a broader analysis in terms of emerging ethical challenges, which opens space for further research.

2. **Age management as a key tool for integrating the ageing population**, which can mitigate labour shortages and support economic growth (Knapińska,

2023; Warwas, 2019). Willingness to work among older workers is increasing; however, they face significant barriers, including age discrimination and limited access to digital job-search tools. At the same time, age management research has revealed differences between traditional and knowledge-oriented organisations, particularly in perceptions of older employees and in the formality and scope of the implementation of age management tools. This indicates the need to develop and coordinate age management strategies that support the professional activity of seniors and optimise their work potential, while the implementation of such measures is crucial not only for increasing the labour participation of older people, but also for the sustainable development of the labour market in the context of an ageing population.

**3. Working pensioners as a strategic potential,** representing a significant factor that can mitigate labour shortages and support economic growth. International studies (Ogawa et al., 2021; Jajko-Siwiek, 2024) show that population ageing and changes in age structure have a substantial impact on economic growth through demographic dividends. Analyses of selected economies indicate that utilising the unused labour capacity of healthy older individuals – the so-called “silver” or “third demographic dividend” – can have a significant macroeconomic effect, with Japan already achieving notable results. At the same time, research in the European context emphasises that the financial well-being of seniors is closely linked to their incomes and available financial resources, while socio-economic factors such as housing and food costs significantly affect the ability of older people to meet basic living needs. These findings underline that supporting the professional activity of seniors and optimising their work potential will not only contribute to sustainable economic growth, but can also improve the financial situation and overall quality of life of older people.

**4. Public policies and formal institutional frameworks are** essential for the sustainability of this system. Since the second half of the 20th century, countries have faced the challenge of balancing the provision of extensive social benefits with the promotion of economic growth, which has generated the need to formulate policies aimed at inclusive development and reducing income inequality. Literature reviews (OECD; Ren et al., 2023; Heshmati, 2019; Lambertini & Proebsting, 2023) identify key inequality factors such as technological change, education systems, globalisation, and labour market reform with relevant institutions. Studies of European countries also show that reductions in government spending have asymmetric effects across sectors, with prices and wages declining mainly in sectors with low exports and products with a low import share. These findings emphasise the importance of coordinated public policies that take structural and institutional frameworks into account and integrate fiscal, educational, trade, and labour-market measures. Successful policies therefore require a comprehensive approach that addresses the root causes of inequality and supports sustainable economic growth.

**5. Future research in the field of working pensioners and the silver economy** should be multidisciplinary, combining economic, social, demographic, and organisational approaches (Cucculelli, 2023; Bojanić, 2024; Krzymińska, 2020). Such an approach will enable a comprehensive analysis of the potential of older workers to mitigate labour shortages and support economic growth. At the same time, it will allow for a better understanding of the impact of public policies, age management, and the financial well-being of seniors on their professional activity and standard of living. Multidisciplinary studies can identify optimal strategies for integrating older workers into the labour market and minimise the risks of age discrimination or social inequality. Such research will provide valuable evidence for the design of effective policies and organisational measures in the context of an ageing population.

### **Slovakia-specific ageing-related challenges and implications for the labour market**

Although population ageing is a pan-European trend, Slovakia faces a particularly sharp combination of demographic and labour-market pressures. National demographic projections indicate that population ageing will be one of the most significant structural features of Slovakia’s development over the coming decades, alongside population decline, with substantial consequences for labour supply and dependency burdens. In addition, evidence from OECD research shows that Slovakia is expected to age rapidly and that the age of labour-market exit is among the lowest across OECD countries, which increases the urgency of extending healthy working lives and strengthening retention of older workers.

In practical labour-market terms, this creates several interconnected challenges: (1) tightening labour supply and skills shortages as large cohorts retire, (2) heightened pressure on public finances and social protection systems as dependency ratios rise, and (3) increased risk of labour-market segmentation among older workers (e.g., early exit pathways, limited access to reskilling, and age-related discrimination). These pressures reinforce the need to treat the silver economy not only as a consumer-market concept, but also as a strategic labour-market and HRM framework in Slovakia – centred on age management, lifelong learning, and intergenerational knowledge transfer. This is consistent with the paper’s argument that Slovakia’s demographic change can be converted into economic and organisational value if institutions and employers implement coordinated measures supporting longer working lives and age-inclusive work environments.

### **Conclusion**

The silver economy is emerging as a key pillar of the future labour market and economic policy of the Slovak Republic. Its development requires coordinated cooperation between the state, the business sector, and educational institutions, as well as a change in societal discourse on the value of work and age. If population

ageing is perceived not as a problem but as an opportunity, Slovakia can transform its demographic challenges into economic and social capital, thereby becoming an active participant in the European longevity economy.

From Slovakia's perspective, the findings are of particular significance. According to Eurostat forecasts (2023), the country ranks among the states with the fastest rate of population ageing in Europe, with the share of people aged over 65 potentially exceeding 30% by 2050. This trend represents a major challenge for the sustainability of the workforce, the social system, and public finances, but at the same time offers an opportunity to strengthen innovation potential through an active employment policy for older workers.

Based on the synthesis of scientific knowledge, several recommendations can be formulated for the Slovak labour market and public policy-making:

1. **Development of active ageing policies** – systematic incorporation of the principles of active ageing and lifelong learning into national employment and education strategies.

2. **Support for age management in enterprises** – implementation of age diversity management tools, intergenerational mentoring programmes, and adaptation of the working environment for older workers; the introduction or expansion of part-time work, remote work, and flexible working arrangements that allow older workers to remain active in the labour market according to their abilities and lifestyles.

3. **Reduction of age discrimination** – legislative and awareness-raising measures that promote equal opportunities and improve societal perceptions of older people.

4. **Linking economic and social policy** – integration of employment programmes, healthcare, and social services into a unified longevity policy framework.

5. **Support for research and innovation in the silver economy** – creation of partnerships between academia, public institutions, and businesses with the aim of developing new markets, products, and services for the older population.

6. **Financial and tax incentives** – creation of incentives for companies and individuals to support the employment of older workers, such as tax reliefs and bonuses for intergenerational mentoring.

7. **Policy monitoring and evaluation** – systematic monitoring of the effectiveness of active ageing and age management policies through indicators of employment, employee satisfaction, and economic impact, in order to adapt measures to the real needs of the labour market.

From a theoretical perspective, the article contributes to the development of knowledge by systematising scientific schools and conceptual approaches to the silver economy and by creating a review framework suitable for further research in the Central European context. Its practical contribution lies in the identification of specific areas in which enterprises, state institutions, and the academic community can respond to demographic change proactively, rather than merely adaptively.

From a methodological perspective, the paper confirms that a systematic literature review represents an effective tool for integrating theoretical knowledge across disciplines and that an interdisciplinary approach is essential for a comprehensive understanding of the phenomenon of ageing.

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