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Historical and prospective dimensions of aging in the Western Balkans

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Abstract

The background paper provides literature review of *Historical and Prospective Dimensions of Aging in the Western Balkans.* It represents one of the most comprehensive regional analyses of demographic transition, ageing, and socio-economic transformation in the post-socialist Western Balkans—specifically Albania, Bosnia and Herzegovina, and North Macedonia. Produced by the Center for Research and Policy Making (CRPM), this study addresses a growing policy and academic gap: the absence of integrated demographic, economic, and institutional analyses that connect low fertility, out-migration, and population ageing to fiscal sustainability, social protection, and labour-market performance in non-EU Southeastern Europe. The study to this end advances a comparative framework linking demographic processes to macroeconomic variables—employment, productivity, fiscal balance, and social expenditure. The *Historical and Prospective Dimensions of Aging in the Western Balkans* thus serves as both a diagnostic and strategic instrument: a foundation for evidence-based policymaking to support EU accession, as well as cross-regional cooperation on social inclusion and demographic as well as economic resilience.

Keywords
Ageing, Elderly, Fertility, Health and Pension systems, labour market, Social protection, Migration, Gender.

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Résumé

Ce document de référence présente une revue de la littérature sur les dimensions historiques et prospectives du vieillissement dans les Balkans occidentaux. Il constitue l'une des analyses régionales les plus complètes de la transition démographique, du vieillissement et de la transformation socio-économique dans les Balkans occidentaux post-socialistes, et plus particulièrement en Albanie, en Bosnie-Herzégovine et en Macédoine du Nord. Réalisée par le Centre de recherche et d'élaboration des politiques (CRPM), cette étude comble une lacune croissante dans les domaines politiques et académiques : l'absence d'analyses démographiques, économiques et institutionnelles intégrées reliant la faible fécondité, l'émigration et le vieillissement de la population à la viabilité budgétaire, à la protection sociale et à la performance du marché du travail en Europe du Sud-Est non membre de l'UE. À cette fin, l'étude propose un cadre comparatif reliant les processus démographiques aux variables macroéconomiques : emploi, productivité, équilibre budgétaire et dépenses sociales. L'étude des dimensions historiques et prospectives du vieillissement dans les Balkans occidentaux sert ainsi d'outil de diagnostic et de stratégie : un fondement pour l'élaboration de politiques publiques fondées sur des données probantes, en vue de soutenir l'adhésion à l'UE, ainsi que la coopération interrégionale en matière d'inclusion sociale et de résilience démographique et économique

Mots-clés
Vieillissement, personnes âgées, fécondité, systèmes de santé et de retraite, marché du travail, protection sociale, migration, genre.

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Introduction

Population aging is one of the most crucial challenges of our time. Population aging, characterized by increasing numbers of older persons in a population, is an inevitable component of the demographic transition (Dörflinger, 2025) and is related to different opportunities and challenges for economies and societies globally. Due to declining fertility and improving life expectancy, the world population aged 65+ is growing at an unprecedented rate (Harrington et al. 2011; Janeska et al. 2018). Low fertility is often linked with factors such as urbanization, increased access to education and employment opportunities for females, and postponement of marriage and childbearing. Consequently, the younger proportion of the population is not growing as rapidly as in previous age groups (Agnihotri, 2023). Low fertility is a complex and structural phenomenon that cannot be solved only through policies promoting childbirth, since it implies multidimensional aspects over social, economic, cultural, and political spheres (Yong-Chool et al 2025). Among the factors that influence life expectancy are the factors related to health behaviors, healthcare access, socioeconomic background, and the physical/social environment (Qiu and Wu, 2022). At the same time, advances in healthcare, improved living conditions, and better access to medical services have led to an increase in life expectancy and an outstanding fall in mortality, partly as a result of the changing nature of the main causes of death (Rahman and Jiang, 2023). As a result of the remarkable advancements in science, medicine, and public hygiene in the last 100 years the number of people living longer has increased than ever before (Saeed et al. 2023). Numerous theories, (e.g. economic theories; Second Demographic Transition Theory) and many empirical investigations proposed that increasing in life expectancy is due to advancements in medicine, economic development, changes in lifestyle, environmental factors, as well as networks for social support (Caporale et al. 2023).

These two drivers contribute to population aging and often to population decline. While fertility decline is the key driver of population aging, mortality improvements have a significant role in later phases of the demographic transition (Dörflinger, 2025). Fertility decline often is accompanied by emigration from poorer to richer countries as a secondly important driver of population decline (Siskova et al. 2023) and this is often posed by a skill discrepancy on the labor market and/or by low salaries for highly-skilled and those portions of the population able to move. Migration can have a rejuvenating or aging effect on a population, depending on the age structure of the migrants as

well as the resident population. In addition to the direct impact of migrants, the fertility of migrants indirectly may affect the age structure in the long run (Dörflinger, 2025).

With the proportion of the EU population aged 65+ expected to reach almost 30% by 2050, understanding social well-being in old age is a key priority (Montorsi et al. 2023). Europe, and especially the countries in South Europe are among the most affected by the changes in population age structure, thus in 2019, one in five Europeans were 65+ years old and it is anticipated to be one in four in 2050, and one in three by 2100 (Abio et al. 2023). Besides, in Europe, by 2060, the number of 'oldest old', that is, persons over the age of 80, is expected to grow by roughly 40 million, in percent, it will increase from 4.4% in 2008 to an anticipated 12.5% in 2060 (Apicella et al. 2024). Simultaneously, the proportion of working age in the EU-28 is decreasing, while the proportion of retired people is increasing. As a result, during the period from 2018 to 2100, the old-age dependency ratio is forecasted to increase from 30.5% to 57.3% (Márquez-López, 2023). According to Helvetas (2021), many SEE countries are facing a decline in their working-age population. This trend is more noticeable in the Western Balkans. To cope with the decline in the working-age population, Southeastern European (SEE) countries have started to rise the retirement age or will have to do so in the next few years. Also, compared to the EU, productivity is low, as are female employment rates. Such demographic changes has significant implications for societies, economies, family dynamics, pension and health systems globally (Agnihotri, 2023).

Therefore, over recent decades the phenomenon of population aging has gained substantially in importance mostly because of a growing awareness that future populations will include an increasing proportion of older persons, raising possibly paramount budgetary implications for the governments (Cameron, 2023). Thus, the increasing share of older people in the population, i.e. population aging will become one of the most important social transformations of the twenty-first century, with implications for almost all domains of society. The continuous aging of the population, in all its associations and implications, gives rise to compound social, political, economic and political challenges (Apicella et al. 2024). Population aging brings consequences and challenges for socio-economic development and health, such as an increase in the old-age dependency ratio, employment, savings, consumption, and economic growth, determines the ratio of net producers and net consumers, health and healthcare expenditure, public health (Adanlawo and Nkomo, 2023). The economic implications of aging are very different, ranging from possible changes in the consumption basket as well as savings and

investment patterns to declines in labor supply and productivity, not only such as the employment rate or hours worked per employee but also in human capital features (Cuadrado et al. 2023). A smaller portion of the population of working-age can impact labor markets, possibly leading to labor shortages and affecting economic productivity. In turn, this may require adaptations in retirement policies and stimulate older persons to remain active for longer in the workforce (Agnihotri, 2023).

The demographics of aging, with their multiple economic and social aspects, represent one of the most urgent and significant policy challenges. Progress in the last-mentioned domain would help prolong working age and improve health-related quality of life. Longevity, considered a big win, become one of the major problems of developed societies, where aging has become unsustainable. Empirical studies reveal that even very old people can benefit from health advancements. For this reason, people will likely continue to live longer and longer. With increasing longevity, the costs of the health system are becoming too much. Accordingly, policymakers and governments need to adjust to these demographic shifts by implementing policies that address certain needs and challenges related to an aging population. This may include developing social support systems, retirement schemes and satisfactory healthcare infrastructure.

Some countries had years to adapt, as their nations have been aging for more than a century (for instance, it took France 115 years for its percentage of people aged 65+ to increase from 7% of the population to 14% of the population; and the United States almost 70 years for this transition to occur). For other, less-developed nations this process began not long ago, where demographic dynamics due to different fertility and mortality trajectories as well as migration (Dörflinger, 2025) are being squeezed into a shorter time frame (Harrington et al. 2011). Thus, according to Harrington et al. (2011), population aging when speaking mainly in the U.S. and Western Europe started to re-order the structure of life course known in the 20th century: education - work and parenthood – retirement by extending schooling/training, postponing entry into full-time employment and household arrangements, delaying life partnering and parenthood, postponing or eliminating retirement, and revising expectations concerning life after employment. Thus, these changes revise the transitions from childhood to adolescence, adolescence to adulthood, and adulthood to old age, and redefine the meaning and existence of long-standing roles and categories – student, employee, spouse, parent, retiree, and so on, about which both personal specifications and social policies are developed.

The impact of the population aging process on various areas of social life will be determined by the prospective demographic structure of the future society (Grinin et al. 2023a). The negative impacts and the issues linked with population aging include economic recessions, pension crises, caring for the growingly more disabled and vulnerable people, enabling the financial savings of the elderly, the issue of ageism and longer life expectancy. Grinin et al. (2023a) point out the importance of innovative technologies in medicine, biotechnologies and so on which development can be stimulated specifically by the process of aging and the need to increase life expectancy. Accordingly, the process of aging may create positive impacts with an urgent demand for labor-prolongation technologies, as well as provide an important stimulus for the field of medicine. A wise country should invest heavily in research and biomedicine, genetics and nanotechnology for more effective treatments of chronic and degenerative diseases, as well as in medical-technical innovations (Barbie, 2005). The focus on prevention is also of great significance. Grinin et al. (2023b) analyzed the process of global population aging and its significant impacts on all areas of public life in the 21st century. Global aging is likely to create a serious demand for labor-saving technologies, as well as give a powerful impetus to the field of medicine. As a result of the largely symbiotic development of the process of global aging and the adaptation of society to it, and due to the completion of the cyber revolution and the achievement of an advanced stage of global aging, a new cybernetic society will be formed by the end of the 21st century. As Grinin et al. (2023b) consider, this society will be super-technologically and socio-technologically regulated at all levels and is expected to be a society of the elderly, where as a result of the aging process the institutionalization of age differences will become socially much more significant than today, relying more or less completely on smart technologies and self-regulating systems based on artificial intelligence. The research focus of this report is on the demographics of aging and the future balance of the health care, pension and social protection systems and changes in the labor market in three Western Balkan countries: Bosnia and Herzegovina, N Macedonia and Albania.

1. Objectives of the literature and policy review

The peculiarity of the Western Balkans and the determinants of demographic changes (lower economic development, ethnic conflicts, failure to provide relevant population and social policies) is an important reason for undertaking a comprehensive research study, particularly for these three countries. First step in this is producing a literature and policy review.

Numerous studies on demographic change provide overview of the impacts on socio-economic domains in Western Balkans, but there remains an insufficient understanding of how institutional frameworks mediate these relationships. In addition, contemporary challenges, including population aging, sub-replacement fertility, and demographic inequalities, are poorly explored in terms of their economic implications. Therefore, this literature and policy review accounts on all previous work that responds to the main research question on how population and socio-economic systems can adapt to responses to demographic change impacts in these three Western Balkan countries, exploring the complexity of interaction between demography and economy, including determinants of extremely low fertility, macroeconomic impacts of aging, interactions between implications of demographic transformations and development challenges and institutional adaptations to new demographic realities in these three countries. This way we are filling the gap and will provide a contribution to academic knowledge as well as evidence-based policy formulation.

On the European demography map, Western Balkans is placed similarly to other South European countries. As life and health and other demographic trends are determined by environment, culture, economic and financial systems, this study is looking beyond the demographic determinants of population but focuses on the economic, social and cultural factors which cannot be disregarded in a more comprehensive analysis of the phenomenon of population aging. It also focuses on how demographic changes impact social protection, health systems and the viability of the economic model and financial system in place. Hence, the decline in fertility rates in most Western industrialized countries as well as the Western Balkan countries, and the broad improvement in longevity depend on the alignment of other economic, social and cultural factors. Furthermore, the growing instability of the labor market across Europe, including the Western Balkan region, has strongly influenced the procreative behavior of young couples, and the insecurity due to the erosion of social security systems, raises some critical questions about living conditions in the future. Therefore, an interdisciplinary approach to the study of population aging, enhancing a broader perspective of the phenomenon, might contribute to advancing both demographic and socioeconomic policies.

Undoubtedly, analysis of these processes aims to fill up the research gap and to provide a practical policy perspective informing and facilitating policy dialogues with stakeholders in the target countries. The analysis is carried out at the state level of Albania, North Macedonia and Bosnia and Herzegovina, as well as at the level of administrative units of B&H, i.e., Federation of Bosnia and Herzegovina (FBiH), Republika Srpska (RS), and Brčko District (BD). Generally, inadequate information due to incomplete data (especially migration data) limits the exploration and analysis of demographic development in these countries and their regions. However, demographic processes are not tackled enough in official documents and policies of these three countries, leaving room for proper research in this regard. Therefore, the three countries face serious population and development challenges and there is a need for a further research investigation of the current trends and future scenarios of demographic development of these countries for giving a prioritization of this phenomenon. In particular, Bosnia and Herzegovina and North Macedonia are the countries that emerged from the dissolution of former Yugoslavia and are in a context with numerous population challenges lie ahead that need to be properly addressed in order to achieve sustainable development and a more favorable socioeconomic and political environment for positive population trends. In order to make measures and quantifications of the demographic effects on socioeconomic and fiscal conditions in these countries for the purpose of this research we have simulated different scenarios based on the relevant data available (such as UN, World Bank data) and certain hypotheses.

To this end, the study will:

1. Examine how changes in demographic structures —mortality/morbidity, aging, and migration—and dynamics influence and are influenced by current and future socio-economic conditions.
2. Examine how demographic changes in the target counties and their influence on urbanization, rural depopulation, and spatial distribution of populations; explore the strategic and financial implications of settlement and depopulation dynamics for development.
3. Explore whether the socio-demographic characteristics of aging populations can help mitigate climate change effects, but also assess their adaptive capacities.
4. Explore how family structures are evolving with aging populations and migration patterns; review and assess the effectiveness and coverage of policies related to health, education, and social welfare; and determines how these policies address the needs of different demographic groups, particularly the elderly and marginalized communities.

There is a new ongoing phase of demographic evolution in Europe and the Western Balkans too where younger stay longer in their families, postpone marriage and usually have one child later in their life and expect to live longer, thus all of this contributes to

an aging population. The countries of Western Balkans have experienced this demographic phenomenon and have performed similar socio-demographic policies as measures to this issue.

The study will contribute to addressing the issue from an economic viewpoint starting from the labor market participation of elderly and women, pension system, retirement plans and provisions as well as the worsening in the demographic and economic dependency ratios. Moreover, the research study additionally makes important contributions in the fields of intergenerational transfers, health care system, national budgets, migratory contexts and spatial displacements. All of these trends and attitudes have changed in the region in the last decade, for example, people nowadays start their working careers later and such an attitude is likely to continue throughout their life cycle. Understanding current demographic trends and their causes, as well as evaluating expected demographic outcomes and their socioeconomic consequences, will help policymakers focus their attention on the increasing longevity to formulate effective policy interventions and population policies. Therefore, this study aims to explore how population and socio-economic systems can adapt to responses to demographic change impacts, providing insights into their resilience strategies.

To narrow down the research the study will particularly focus on three countries: N Macedonia, Albania, and Bosnia and Herzegovina. The transitional position of these three countries on the European demographic map is interesting. These three countries are situated on the edges of various cultural and specific political and economic systems. However, the economic and political transitions in these three Western Balkan countries provide an interesting setting for testing the hypothesis of the influence of economic and ideational factors on demographic shifts. Hence, all three countries demonstrate diverse regional contexts raising fundamental questions about the linking characteristics of demographic transformations, economic development and challenges for the social systems.

2. Historical perspective of the demographic development in the Western Balkans

The Western Balkans region is made up of five EU candidate countries: Montenegro, Serbia, N Macedonia, Albania, Bosnia and Herzegovina and Kosovo (potential candidate). Under the socialist and communist rule during 1945-1991, the region of Western Balkans consisted of two political entities: Yugoslavia and Albania. These mostly rural societies experienced rapid industrial modernization and urbanization, together with major advances in education and health (Emini et al. 2018). The socialist

self-management of former Yugoslavia diverged from other state socialist regimes in Europe in many ways. In contrast to other planned economies, rapid industrialization during the 1950s was accompanied by considerable rural-to-urban migration and unemployment, which became a chronic issue (Čipin et al. 2020). In the Western Balkans, urbanization came later and it is still below the European average, thus, measured as a percentage of the population living in urban areas, the Western Balkans averages 55.4%, while the European average is 74% (Emini et al. 2018). This is partly a result of low levels of urbanization even before the existence of Yugoslavia. Thus, after the breakup of the Yugoslav Federation, the newly created nation-states had to rapidly develop their capital cities and urban networks, as they were important for post-industrialization. Urban centers, especially capital cities, continued to grow despite the decline in population at the national level as citizens gravitated to urban areas in search of better jobs and educational opportunities, access to better healthcare, culture, and more developed infrastructure (Emini et al. 2018).

The acceleration of demographic transition and the increasing speed of natural decline in Western Balkans took place in the 1990s or the 2000s, and in all cases, it shows a convergence with the demographic trends noticed elsewhere in Western Europe (Boulineau et al. 2016). The transition from an agrarian society to industrialization did not consistently come to Yugoslavia. Thus, in northern parts of Yugoslavia, i.e. Slovenia and Croatia and also some parts of Serbia, this transition started earlier than in not fully developed parts of Kosovo, Montenegro, Bosnia and Herzegovina and Macedonia (Čipin et al. 2020). When the Western Balkans region is compared in terms of relative similarity in fertility with the rest of CEE during the communist period, it can be noted that in the Western Balkans, there were pronounced regional differences that reflected its poorer or richer areas (Lerch, 2018). In their research work on former Yugoslavia, Čipin et al. (2020) clearly distinguished three clusters based on similarities in cohort fertility development. The first cluster contains Slovenia, Croatia, and Serbia, countries that are closer to Western and Central Europe, both geographically and culturally. In this cluster, the demographic transition started earlier than in the second cluster, which consists of Bosnia and Herzegovina, N Macedonia and Montenegro. The third separate case represents Kosovo itself. This was also evident from the period fertility levels, where the decline in Serbia, Croatia and Slovenia had already started at the beginning of the twentieth century, while in other parts of former Yugoslavia it started much later - in some places, as late as the 1950s. Fertility in Kosovo started declining substantially only around 1960-1970 retaining the highest fertility levels in the European context. However, Čipin et al. (2020) found that the demographic transition started about 30 years earlier in the low-fertility (first) cluster than in the high-fertility (second) cluster. Čipin et al. (2020) concluded that the two-child family model was much more widespread in the low-fertility (first) cluster and that there was a continuous converging in fertility levels, with a persisting gap associated with children of the third birth order as well as the parity progression from the second to the third child. In

contrast to Western and much of Eastern Europe (Lerch, 2018), where secular attitudes for the mean age at marriage of females contributed significantly to decreases in fertility levels, in the Western Balkans the only relevant factor in the fertility decline was limitation of higher-order births.

Using available data from the World Bank for the period from 1960 to 2020, Szymańska (2022) analyzed the trends of the population growth rate in the countries of Western Balkans. The decline of population growth rates in all Western Balkan countries started in 1960. In the early 1990s, Albania had the highest population growth rate, but then there was a significant decline, in 1989 the population growth rate was 2.7%, in 1990 it was 1.8% and 1.2% in 1991. In Bosnia and Herzegovina, in 1993 the population growth rate was -3.7%. From 1989 to 1997, the population of Bosnia and Herzegovina decreased dramatically by about 772,000 people, i.e. from 4.508 million in 1989 to 3.736 million in 1997. In addition, during 1990-2020 there was a total decrease in Bosnia and Herzegovina from 4.508 million to 3.281 million, i.e. a decrease of 1.23 million. Following the Bosnian War in the 1990s, Bosnia and Herzegovina had its first civil census in 2013. The estimated population growth rate in 2013 was negative (–1.745%), and it was the second highest recorded decline in the period 1960–2020, after the negative growth rate recorded in 1993 (–3.723%). On the contrary, since 2000, North Macedonia and Montenegro have had a completely stable population growth rate trend. Meanwhile, in Albania, there has been a slight increase in the population growth rate after 2010.

Overall, since 1995, the population growth rate in Albania and Serbia has been negative. In Bosnia and Herzegovina, population growth was positive between 1999 and 2006, in Montenegro it was also positive from 2001 to 2017, and in N Macedonia, population growth was generally positive, except for 2020, when the growth rate was –0.0037%. In this regard, it is interesting the case of N Macedonia (it is assumed that it is not an isolated case in the Western Balkans), where according to the official data there was a positive population growth in the period before 2021, in its population estimates the State Statistical Office did not take into account the real number of emigrants abroad. Thus, available data from Eurostat showed that in the period 2007-2017 alone, in the EU recipient countries alone, the number of Macedonian citizens increased by around 140,000 (Janeska et al. 2018). In addition, their increase abroad and in other recipient countries around the world is also significant. Accordingly, in the period before 2021, it is very likely that N Macedonia also experienced negative population growth rates.

The economic and social troubles that came after the 1991 breakup of Yugoslavia generated a sharp fall in living standards and a rise in social issues (Čipin et al. 2020). These changes led to social and economic insecurity, worsened by the abrupt start of wars. Recuperation started in the 2000s when all former Yugoslav countries once again reached their GDP levels from 1989. Towards the end of the 20th century, the

demographic changes in the Western Balkans in terms of mortality and birth rate were influenced by political disorders and a lack of economic certainty (Boulineau et al. 2016). During the last three decades, all countries in the Western Balkans have experienced a significant population decline, and mostly, this depopulation trend is the result of both negative natural and migratory balance (Marchais, 2023; Çela et al. 2020; Ármás, 2023; Emini et al. 2018). Accordingly, in the region, the difference between the number of births and the number of deaths is negative, which leads to population decline. Since 2021, all countries, N Macedonia, Montenegro, Bosnia and Herzegovina, Serbia and Albania observed greater crude death rates than crude birth rates.

To this end, Western Balkans represents the most prominent depopulation zone in Europe (Miladinov, 2024; Nikitović, 2016; Kotzamanis and Parant, 2018; Cameron, 2023) with low birth rates (Boulineau et al. 2016; Janeska et al. 2018) and with higher emigration than immigration (UN, 2024; Janeska et al. 2018; Domachovska, 2021). In their analysis, Nikitović et al. (2024) reveal that the Western Balkans is at a demographic turning point between a future of prominent depopulation and unsustainable burden of an economically dependent people and a future that would slow down the reduction and aging of its population. Thus, Serbia is one of the first countries in the Western Balkans region to experience a shrinking and aging population. According to World Bank data, the population of the Western Balkans has been steadily decreasing from 1990 to 2021. Albania and Bosnia and Herzegovina were the Western Balkan countries hardest hit by this population decline, resulting in 25 and 30 percent population losses, respectively (World Bank 2025; Ármás, 2023). The extreme population decline in Albania is particularly worrying, as the country was not affected by military conflicts, although large waves of emigration began to leave impoverished and oppressive Albania as borders opened after the fall of socialism in the early 1990s. The rapid population decline is partly due to falling fertility rates that were in line with trends in Western Europe. The percentages may vary by country, but the trend of population decline is common for all Western Balkan countries. Of particular concern is that four Western Balkan countries are among the top 20 countries in the world with the largest population decline, as noted by Ármás, (2023), who considered current trends and estimated that between 2020 and 2050 the population in Serbia will decrease by 19%, in Bosnia and Herzegovina by 18.2%, in Albania by 16%, and in N Macedonia by 11%. Among the 20 countries, only Japan (16.3%) and Cuba (10.3%) are not from Southern, Southeastern or Eastern Europe Ármás, (2023). The Central Eastern and Southeastern Europe region tops the list not only due to the decline in birth rates but also due to the high level of migration that has traditionally been a characteristic of the countries of this region.

Low fertility rates highlight the progress of natural depopulation in the region and the very low sub-replacement rate. All Western Balkans countries are far below the threshold of 2.1 children per woman which is necessary for demographic renewal, thus on average - the fertility rate in the region is only 1.5, a level similar to the average of

the EU but lower than that in a few Central and Eastern European countries (Marchais, 2023). However, the fertility rate in 2021 was below 1.30 in Bosnia and Herzegovina, 1.44 in N. Macedonia, 1.31 in Albania, 1.52 in Serbia and 1.76 in Montenegro. The situation has not improved significantly in recent years. The fertility rates in 2021 for all countries of Western Balkans are worrying, particularly for Albania and Bosnia and Herzegovina, whose TFRs are below 1.4; to be specific, in 2021, Bosnia and Herzegovina had the lowest fertility rate in the world at 1.26 (Ármás, 2023). Szymańska's (2022) assessment based on the dynamics of the data highlighted a faster decline in the fertility rate and birth rate in the Western Balkans region than in the EU average. Comparing the last three decades with the 1960s, Szymańska (2022) noted that the largest decline in fertility rates and birth rates occurred in Bosnia and Herzegovina and Albania. For example, between 1960 and 2019, in Albania, the fertility rate decreased by 75% and in Bosnia and Herzegovina by 67%. Similar downward trends have been observed for birth rates, with Albania in 2019 down 72% from 1960 levels, and Bosnia and Herzegovina down 75%.

Understanding mortality is relevant to policymakers to suggest and design solutions for sustainable state pension reforms and budget transfers, or to address differences between socio-economic groups (Euthum et al. 2024). Some advancement in mortality forecasts have an instant impact on policy decisions regarding present and future resource allocation, in fact, at present, the importance of accurate mortality forecasts for society is more significant than ever before (Rahman and Jiang, 2023). Since the very beginning of 2000, the region of Western Balkans has been intensely influenced by demographic processes (Szymańska, 2022). Thus, since the 1950s, the drop in mortality rates in all of the countries of the Western Balkans is obvious through the evolution of infant mortality rates and life expectancies at birth in each of the countries and it led to the growth of their populations as their citizens were living longer (Kontogiannis, 2024). Therefore, the Western Balkans region faced more rapid changes in the trend of mortality rates between 1980 and 2000; while the average mortality rate for the EU was rather stable (Szymańska, 2022). However, since 2000 these mortality developments have started to contribute to the ageing of their populations and a negative natural balance as a result of the continuous increase in the number of deaths combined with low fertility levels. Consequently, these demographic processes negatively affected the socio-economic conditions of the region (Szymańska, 2022). In addition, since the 1990s life expectancy at birth has risen notably in the Western Balkan region, e.g. reaching 79.6 years in Albania, 77.9 years in Bosnia and Herzegovina 77.4 years in N Macedonia in 2023 (UN, 2024), and compared to the levels in 1990; 73.1; 72.3, and 71.2 years, respectively, there are gains in life expectancy from 6.5; 5.6; and 6.2 years for the period 1990-2023, respectively.

It is worth noting that this trend of population decline in the countries of the Western Balkans share with the rest of Europe; in addition to declining birth rates, the region of

Western Balkans suffers from emigration generated by war conflict and economic hardship (Emini et al. 2018). In contrast to Western Europe, since the 1990s demographic patterns in Western Balkans have been more deeply affected by migrations. These migration flows were induced by wars and crises and due to forced migrations and displacement of population between the countries of the Western Balkans, followed by refugees for political reasons or economic reasons (Boulineau et al. 2016). The natural balance of the Western Balkans is similar to the average of the European Union. These two regions differ in terms of net migration, i.e. the difference between the number of emigrants and the number of immigrants (Marchais, 2023). In many EU countries, net migration fails to balance the larger number of deaths than births, but in all countries of the Western Balkans, net migration is significantly negative. However, one of the major issues when speaking about emigration from the Western Balkans is the lack of a well-organized data-gathering system, which results in the absence of accurate and updated data on emigration (De Silva, 2024). Various studies and data sources show that almost all Western Balkan countries are experiencing extensive emigration abroad, which calls into question the relevance of available data as well as the complete registration of people emigrating from Western Balkan countries (Janeska et al. 2028). Emigration was not controlled as a result of the intense crises because of wars during that time. Migration data have been underestimated due to non-comparable definitions of the resident population according to the different censuses across the Western Balkan region and minorities have been wrongly estimated too due to calls for boycott at the moment of the census (Boulineau et al. 2016). Indeed, the lack of reliable and precise data is an even greater problem for the Western Balkans. In some cases, countries tend to hide or modify the official data, while in other cases, such as N Macedonia, the country simply did not conduct a census for almost two decades (Çela et al. 2020).

Labor from the Balkans has been working as guest workers in Western European countries since the late 1960s, a tradition that has continued and even increased since the 1990s. The fleeing of people, especially young and skilled workers and well-educated individuals, is already leading to labor shortages in the region, which could discourage the inflow of foreign direct investment (FDI) that would be crucial for development (Ármás, 2023). As a result of the emigration of a large proportion of children, young working-age population and female population of fertile age from the Western Balkans to abroad, migrations have a significant negative impact on population growth, natural population increase and population aging (Janeska et al. 2018), as well as expected important social, economic, and political consequences (Ármás, 2023). However, it is a region that is becoming poorer and where its younger generation and labor force moving abroad (Marchais, 2023). Emigration also indicates a brain drain, leaving societies in deprivation, without their most skilled and educated people (Çela et al. 2020). Both labor and educational opportunities are the most important drivers of migration from the region of Western Balkans, labor migration is a

structural phenomenon deeply rooted in the societies of Western Balkans, like the high rate of youth unemployment, an inadequately performing labor market and poor welfare systems (De Silva, 2024). Accordingly, between 2012 and 2018 some 155,000 inhabitants of the Western Balkans region emigrated on average each year to a country of the OECD (Organization for Economic Co-operation and Development) and these departures were continuously on the rise. In addition, between 2015 and 2020, annual net emigration from the Western Balkans region to the rest of the world amounted to approximately 135,000 (Marchais, 2023). However, some of these emigrants subsequently returned to their countries of origin, but most of them decided to remain abroad. High levels of political instability and corruption, improving employment prospects in terms of better salaries and working conditions, but also the yearnings to achieve a higher standard of living are push-force factors for labor migration, leading to the depopulation trend in the Western Balkans (De Silva, 2024). This is especially applicable to young people who have hardship from poverty, unemployment, and social exclusion. In general, due to natural population growth and high outmigration, there are significant demographic losses in the Western Balkan countries. According to Astrov et al. (2020), migration in the Western Balkans will continue as long as push and pull factors continue, and therefore the population of these countries is expected to decline further in the next few decades. In the short term, migration has positive effects, because it leads to higher personal remittances from abroad and facilitates the functioning of domestic labor markets, which contributes to wage growth. However, in the long term, demographic losses may affect the prospects for convergence of these countries with the EU countries, including in terms of wages. Net migration is negative in all countries of the Western Balkans, in a sufficiently great way in Bosnia and Herzegovina and Albania (Marchais, 2023).

During the last three decades, the Western Balkan countries experienced a phenomenon of large emigration, thus, based on estimation from UNDESA data, Bosnia-Herzegovina and Albania are the countries with the greatest migrants abroad, 49% and 44%, respectively, of their total population, come after by N Macedonia and Montenegro – 34% and 21%, respectively, and Serbia is the country with the smallest number, 15% of the total population (De Silva, 2024). After years of isolation under Enver Hoxha's regime in Albania, many Albanians began to leave their country in the 1990s, moving in, particularly to neighboring states (Marchais, 2023). Recently, this emigration has again reached high levels to the extent that Albania is one of the countries with the largest Diasporas in the world regarding the percentage of the population living in the country of origin. Thus, around 1.4 million Albanians have declared themselves currently living outside the country, which has a population of 2.8 million.

In addition to emigration and unemployment, a multifaceted urbanization trend in Western Balkans needs to be considered as well. In weak economies, as the Western

Balkan economy is, job opportunities and prospects are more available in the bigger urban centers, but as a result, villages become more and more depopulated, which lessens opportunities for agriculture and rural development as well as alternate tourism (Çela et al. 2020). The pattern of rural-to-urban migration in the Western Balkans region is expected to continue in the future, with 250,000 people moving from villages to cities annually only in Serbia (Emini et al. 2018). The rapid pace of urbanization in a weak legal environment in some areas has led to the formation of fully urban areas without building permits, resulting in environmentally unsustainable settlements that lack adequate water and sanitation systems or waste collection services. As urbanization tends to be considered the same as centralization in the Western Balkans, interstate connections in the region are weak, and infrastructure development tends to be concentrated around all major cities, to the disadvantage of smaller and medium-sized towns (Emini et al. 2018). A well-known typical of the Western Balkans region is the link of social inequality with the marginalization of social, religious and ethnic groups. Recently there was adopted positive examples of affirmative action towards smaller communities in N Macedonia, indicating that an advantageous ecosystem for marginalized groups can be deployed (Çela et al. 2020). Many supportive mechanisms exist also in Bosnia and Herzegovina and Kosovo.

The demographic changes and influence on urbanization, rural depopulation and spatial distribution of population in the Western Balkans date from the period after WWII, the period of socialism and the growing industrialization of the urban areas in the region. The trend has been ongoing throughout the years. The implications of settlement and depopulation dynamics for regional development specifically for regions that faced population decline such as rural and remote areas were bigger than for the urban areas. Population declines in rural and remote areas brought a shrinking labor force and a decrease in productivity in economic activities. The reduction of the local tax base limited already poor local services provision which further led to a higher population decline. The ongoing greening of the local development and service provision, which is more expensive for rural and smaller towns and cities, increases the cost per capita for local services as the economies of scale are declining (OECD, 2024). Most affected are social infrastructure facilities including care, education and healthcare. This decline in quality service provision is contributing to migration patterns which lead to local aging as youngsters move to urban areas or other countries, for example, migration has not been integrated for 20 years within the calculations of trends for population statistics in N Macedonia, due to lack of census as well as population registers which prevented accurate demographic forecast for good planning of local and regional development.

Since the 2000s, the post-communist governments in the Western Balkan region made EU accession their priority and this change resulted in the gender equality agenda becoming more visible and public as the EU commenced policy discussions with a special focus on gender equality (Kovačević and Šehić, 2015). However, all Western

Balkan countries need to do much more regarding equality, empowerment, and engagement of women. Thus, the gender imbalance in employment is still high in the countries of Western Balkans with the female employment rate ranging from around 34 % (particularly in the southern part, i.e. Montenegro, Albania as well as Bosnia and Herzegovina) to 42 % or little more in N Macedonia and Serbia, which is far from the European average of 59% (Boulineau et al. 2016). The most developed regions such as the capital and regions' capitals Belgrade and Novi Sad have employment levels of women that are the closest to the EU levels. In a larger number of countries, male labor force participation remains higher than female participation and mostly this is the result of a diverse of factors, which include discrimination, not equal access to education and training, and expectations of society about gender roles and responsibilities (Ramli et al. 2023). Thus, nearly more than one-third of working-age females in the Western Balkans region are either inactive or unemployed. Hence, the participation rate of females in the labor force in the Western Balkan countries is below the EU average (70% in 2022). In 2022, the female labor force participation rate was 67% in Serbia, 63% in Albania, 62% in Montenegro, 52% in N Macedonia and 50% in Bosnia and Herzegovina (World Bank, 2025). The gender employment gap in the Western Balkan region is higher than 10.6 in the EU27, ranging from 8.4 in Montenegro, to 29.4 in Kosovo and 29.3 in Bosnia and Herzegovina (RCC, 2022), but no gender differences can be observed in the unemployment rate, the widest gender gap was in Bosnia and Herzegovina (7.4 percent higher among females than among males). However, horizontal and vertical gender segregation in the Western Balkan labour markets prevails, where women occupy precarious, low-paying jobs related to their care role in the family and society, or low-ranked positions, perpetuating economic inequality. As the EWTCS study shows women are more likely to work part-time than men in all Western Balkan economies, except in Montenegro. Part-time work represents 20.3% of female employment; and earn less than men in the Western Balkans (in Bosnia and Herzegovina the gender pay gap is 37.8%, in Montenegro, it is 21% and in Macedonia 17-18%, in Serbia 9.54% and in Albania is 6.3% (Eurofound, 2025). Women both in the EU27 and in the WB6 spend more time taking care of children and housework (Ibid). However, while the differences between women and men in the EU are 10% in terms of daily care for children and 30% in terms of daily housework; in the Western Balkans, the differences are bigger (20% for taking daily care of children and 55% for daily housework).

3. Measuring of aging in Albania, Bosnia and Herzegovina and N Macedonia

The empirical analysis of population aging uses various measures to determine the progress of the demographic process, thus, in practice, many indicators are used to assess and explain aging (e.g. Janeska et al. 2018: employment rate of the older workers, life expectancy, population growth, total fertility rate, old-age dependency), and the demographic index is one of them, which is based on the participation of older people, 65+ years old, in the total population (Szymańska, 2022). According to that, population aging is interpreted as a process in which there is a notable increase in the number of elderly persons (persons aged 65+) and an increase in the share of these people in the total population, an occurring at the same time decrease in the number and share of people aged 0–14 years. Other two main approaches to measuring ageing (Chang et al. 2019) are, the following:

(i) First and most prevalent set of aging indicators includes measuring changes in the age distribution of the population toward older ages, increasing the median age of the population, increasing the average life expectancy at birth, increasing the number of remaining years left to live, and changes in the ratio between older people and working age groups.

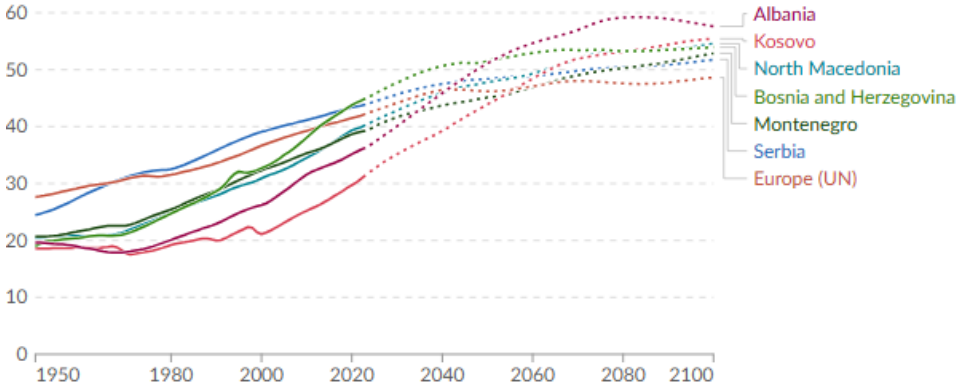
(ii) The second main set of aging indicators focuses on measuring the health status of older populations, using objective measures of the progressive loss of physical wellbeing, mental and cognitive functioning or subjective measures such as self-reported health as well as instrumental restrictions of daily living activities.

Recently several new approaches have been developed to take into account additional characteristics beyond chronological age (the number of years a person has lived) and chronological indicators of population aging (e.g. old-age dependency or total support ratio, which are based on a fixed threshold to define who is considered old, usually 60 or 65 years), using mortality risk, health care needs, age distribution within the population, physical health, cognitive functioning, and expected active life expectancy (Dörflinger, 2025). In addition, prospective age is the most common alternative measure of population aging, relating a person's age to the average remaining life expectancy. The main concept of this approach is that the characteristics of a person, like physical and cognitive health, depend more on the expected remaining years of life (prospective age) than on the number of years lived (chronological age), (Dörflinger, 2025). For this reason, prospective measures can better capture many of the economic and social implications of population aging, for example, health costs are concentrated in the last years of life. Prospective age becomes particularly relevant because in most countries healthy life expectancy tends to increase over time, so that, on average, a 65-year-old today is healthier and

lives longer than in 1950. Therefore, as a result of increasing life expectancy and improvements in health, prospective measures show a slower rate of population aging than chronological measures.

Decline in fertility, emigration of people mostly of working and child-bearing age, and immigration of mainly newly retired people, all these factors lead to a rapid population aging in the region of Western Balkans (Marchais, 2023). Hence, every single indicator, i.e. the median age, the ratio of 65+ in terms of 0–14 ratio, the portion of 65 + in the total population, or the portion of 85 + in the total population shows that Western Balkans countries face the aging process and that will likely experience more intense aging in the 2030s and 2040s (Figure 1-2). Median age divides the population into two equal parts. Thus, Figure 1 shows that the median age in Bosnia and Herzegovina and N Macedonia was 28.7 years and 27.9 years, respectively, in 1990, but reached 44.9 years and 40.3 years, respectively, in 2023. Albania and Kosovo are also aging, but the majorities of their populations are relatively younger and will be younger than other populations in the Western Balkans in the coming years. Demographically, Albania and Kosovo have remained relatively young because they have had high fertility rates in the long term (Marchais, 2023). The median age in Albania and Kosovo was only 22.9 years and 22 years, respectively, in 1990, reaching 36.3 years and 31.4 years in 2023. It should be emphasized that in Serbia the median age was significantly higher than in any other country in the Western Balkans. The median age in Serbia was 35.8 years in 1990, exceeding even then the average level of the EU countries, until 2019–2020, when Bosnia and Herzegovina became the country with the highest median age in the Western Balkans, and with an even greater level of median age than of the EU average, i.e. median age of over 44 years after 2020. However, the median age of the population in Montenegro, N Macedonia, Bosnia and Herzegovina and Serbia are similar to the levels of median age in some of the EU countries.

Figure 1: Median age in Western Balkan countries (1950-2023) and future projections up to 2100 based on UN medium scenario

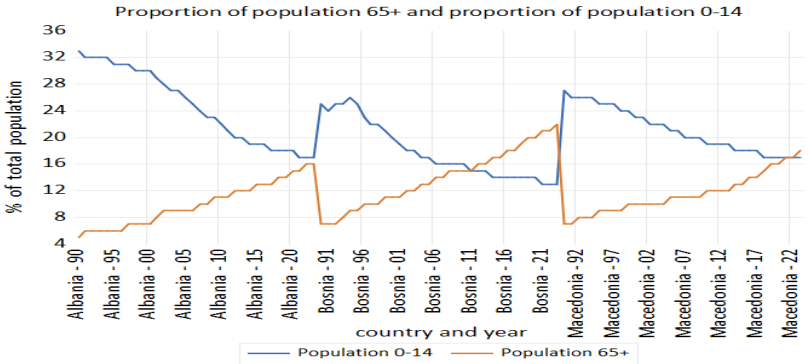


Data source: UN, World Population Prospects (2024b)

In general, the dynamics of aging between 1990 and 2023 or earlier in the Western Balkan region can be analyzed by another different set of indicators as well. Figure 2 presents the dynamics of the population aged 65 and over as well as dynamics of the population aged 0-14 in total population in three countries of Western Balkans. These age groups are typically excluded from the working-age population according to the methodology of the International Labor Organization. The number of elderly people over 65 in the total population in Bosnia and Herzegovina increased by more than 3 times in the period 1990-2023 (i.e. from 7% in 1990 to 22% in 2023), while the increase of EU average was only about 57%. In general, the data on elderly people in Bosnia and Herzegovina indicate periods of constant growth, especially intensive after 2004-2005 until today. In this period, this trend is generally relevant for all Western Balkan countries, but the data reveal a huge difference in the growth dynamics between Bosnia and Herzegovina and the other Western Balkan countries, as well as the EU average. In addition, as a result of historical aspects, the analysis of the dynamics of the participation of the elderly population in the total population has been expanded by analyzing the indicator for the participation of the population aged 0–14 years in the total population between 1990 and 2023.

In parallel with the largest increase in the elderly population in the total population during this period, the largest decrease in the participation of the young population aged 0–14 years was also registered in Bosnia and Herzegovina, exactly almost twice as much during the mentioned period. Thus, in 2023, the lowest share of older age people 65 and more in the total population was in Albania (16%) and the highest were in Serbia and Bosnia and Herzegovina (22%). In 2023, the indicator for Serbia was on a similar level to the EU average. Additionally, the percentage increase in the participation of older people in the total population in the Western Balkan countries over the last 34 years has not been low, from approximately 214% and 220% in Bosnia and Herzegovina and Albania, respectively, to 157% in N Macedonia. In the meantime, the percentage decrease in the indicator measuring the participation of young people in the total population ranged from 48.5% and 48% in Albania and Bosnia and Herzegovina, respectively, to around 37% in N Macedonia.

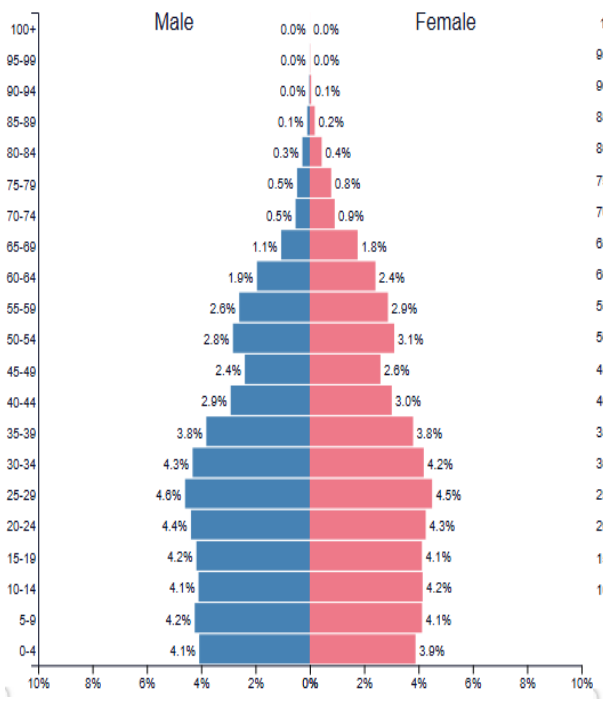
Figure 2: Proportion of population 65+ and 0-14 in Albania, N Macedonia and Bosnia and Herzegovina, 1990-2023



Source: CRPM calculations based on World Bank data (2025)

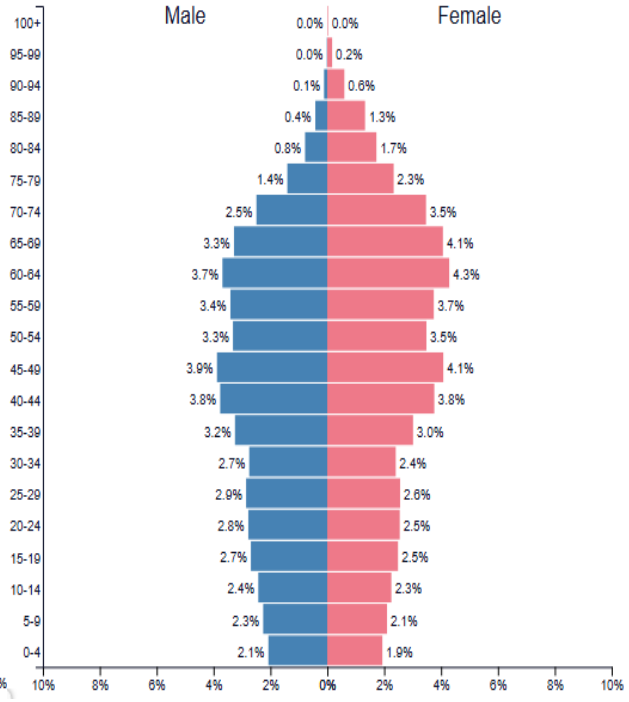
As can be noticed from Figure 2, over the 1990–2023 periods, the population structure has been significantly changed. What is interesting to mention about Bosnia and Herzegovina is that in 2011 the share of the older population and the share of the young population in the total population overlapped, having the same percentage value of 15%. Such an overlap occurred in Macedonia in 2021, with 17% of the same value of both indicators and in Albania, this is expected to happen very soon, i.e. these years by 2025 at the latest. Therefore, since these years, i.e. 2011 for Bosnia and Herzegovina and 2021 for N Macedonia, the percentage share of the old population about the young population in the total population has been smaller and continues to be smaller in the coming years. Considering the data from the World Bank (2025) showing the dynamics of the two aging indicators, i.e. the share of young people in the total population and the share of old people in the total population, it is obvious that the decline in the share of the population aged 0–14 between 1990–2023 in Albania, Montenegro, N Macedonia and Bosnia and Herzegovina was much higher than the EU average. Only in Serbia during the observed period 1990–2023, the decrease of the population aged 0–14 in the total population more or less the same as the decrease of the EU average, i.e. approximately from 19% to 15% or 14% for the whole period. The change in the share of older people aged 65 and over in the total population was more dynamic and advanced, with the highest pace in Bosnia and Herzegovina, mainly since the mid-1990s. Starting from the 1990s, all the Western Balkan countries, except Serbia, experienced higher dynamics of increase in older people over 65 in total population than the EU average. Serbia again followed the path of the average of the EU in terms of increasing the older people of 65 and more in total population during the observed period. Overall, the highest indices were recorded in Bosnia and Herzegovina. Thus, during the analyzed period 1990–2023, Bosnia and Herzegovina changed its position from a generally “young” population to a very aging population. This indicates a very profound change in the demographic structure of the population in the country relative to the region of Western Balkans. As an illustration, Figure 3-4 presents the population pyramids of Bosnia and Herzegovina from 1990 and 2024. It is clear how as a result of population aging the population pyramids of Bosnia and Herzegovina have drastically changed from 1990–2024. Therefore, compared with the population pyramid of 1990, the population pyramid of Bosnia and Herzegovina in 2024 is very narrow at the base and significantly widened at the upper age distributions.

Figure 3 : Population pyramid BiH: 1990



Source : PopulationPyramid.net

Figure 4 : Population pyramid BiH: 2024

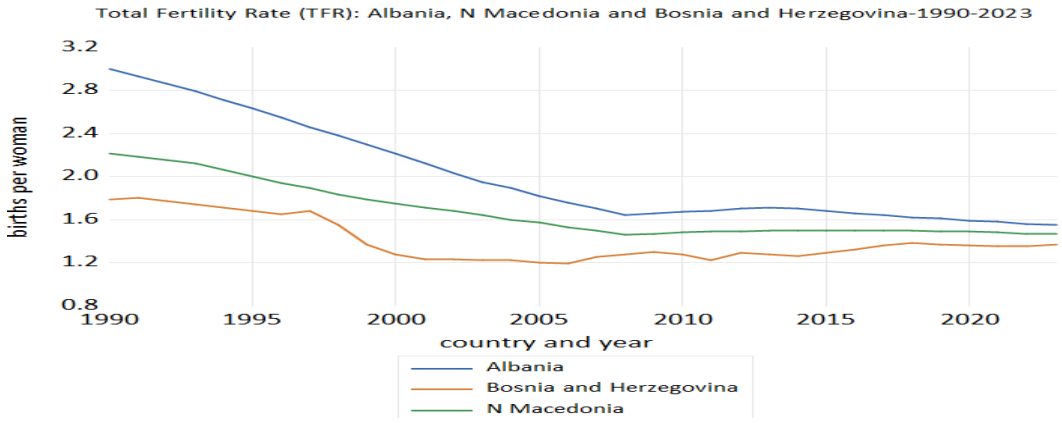


Source : PopulationPyramid.net

4. Components of population aging in Albania, Bosnia and Herzegovina and N Macedonia

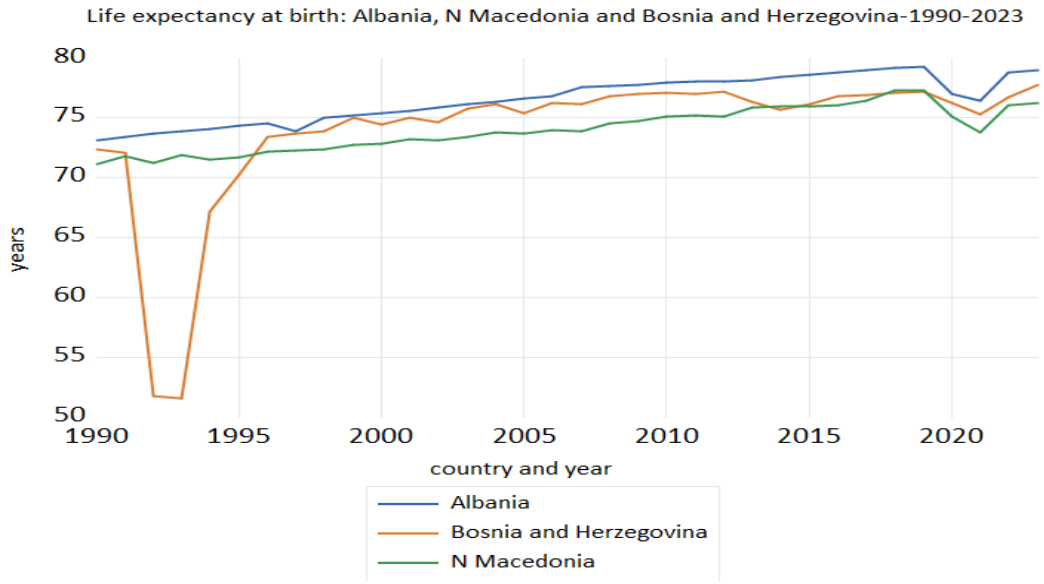
The process of demographic transition refers to long-term reductions in fertility and mortality, leading to a population age structure changing significantly toward older ages (Yin and Bennett, 2012).

Figure 5: Total Fertility Rate (TFR): Albania, N Macedonia and Bosnia and Herzegovina-1990-2023



Source: CRPM visualization based on Macrotrends data (2025)

Figure 6: Life expectancy at birth: Albania, N Macedonia and Bosnia and Herzegovina-1990-2023



Source: CRPM visualization based on World Population Prospects (2024b)

Lower fertility

When fertility is high, well above "replacement level," which is the number of children on average a woman should have, to replace herself with a daughter who consequently will give birth (i.e. 2.1 children), then the age structure of the population will be wide-based. This is a result of the fact that the latest birth cohorts would be much larger than the cohorts now in old age, which were born long ago. As fertility declines, that wide base shrinks, after some time in the context of the exceptionally low fertility experienced by several countries today to the point where the base of the age structure, those in the younger years, is smaller than the upper part of the age distribution. The Western Balkans no longer stand out from Southern EU Members, where the average birth rate is less than 1.5 children per woman (1.2 in Italy and Spain, 1.3 in Portugal, 1.4 in Greece), (Marchais, 2023). Therefore, women from Western Balkans do want to have children, but most of them are studying for longer and want a career too. As argued, the low fertility rate in Western Balkans is related to an exceptionally rapid participation in what could be named "modernity" as well as a lack of certainty for the future (Marchais, 2023). In addition, the very low GDP per capita and growth rates in Western Balkans do give not many prospects for young people seeking employment or housing or those who want to form a family.

Therefore, the patterns of fertility change in the Western Balkans underline the importance of the social and cultural context in mediating responses of people to

political and economic change regarding childbearing behavior (Lerch, 2018). Using the World Bank data and comparing the period from 1960 to 2019, Szymańska (2022) emphasized the highest decline in fertility rate and birth rate in Bosnia and Herzegovina and Albania. In addition, compared to the EU average, data for the Western Balkan countries highlighted a faster decline in fertility rates and birth rates. For instance, in Albania, between 1960 and 2019, the fertility rate fell by 75% and in Bosnia and Herzegovina by 67%. However, the low fertility rates highlight the progress of natural depopulation in this region, as well as the very low sub-replacement rate. The total fertility stood at 1.35 children per woman in Bosnia and Herzegovina in 2022, compared with 3.80 in 1960 and 1.77 in 1990. There was a similar rapid decline of the total fertility rate in N Macedonia during 1960-1990, from 3.84 to 2.21 and in 2024 TFR in Macedonia was registered to 1.47 (Macrotrends, 2025). Albania has experienced a dramatic decline in total fertility since 1960, from 6.49 children per woman in 1960 to 2.98 in 1990 and 1.60 in 2019. Total fertility in the more developed regions such as Serbia has dropped from 2.55 to 1.75 children per woman in 1990 and over that same 60-year time span it declined to 1.42 in 2024 (Macrotrends, 2025). Montenegro has the highest TFR in the region of the Western Balkans; the fertility rate for Montenegro in 2024 was 1.74, compared with 3.60 in 1960 and 2.08 in 1990.

Nowadays, in all countries of the Western Balkans fertility remains well below the replacement level fertility (2.1 children) needed to replace older generations. TFR levels are projected to rise very slightly in the following decades; it is projected to rise to a level of 1.72 children per woman in Montenegro, to keep at a level of about 1.52 children per woman in N Macedonia and 1.57 to 1.58 in Bosnia and Herzegovina and Serbia and to drop further to 1.4.2 to 1.43 children per woman in Albania 2050-2060 (UN, 2024). In many countries in the world including the Western Balkans countries during the two decades or so after the Second World War, there were unprecedented numbers of babies born. The high fertility rates were outstanding but transitory and their effect was long-lasting. These large birth cohorts at the beginning resulted in a disproportionately young population but currently these “Baby Boomers” are achieving older ages and accelerating the process of population aging in the more developed world as well as Western Balkan countries.

Lower mortality

Over time, the improvements in mortality leads to concentration at older ages, as evidenced by the additional years of life that someone can expect to live given that they have already reached, for example, age 65. These improvements increase the proportion of the population at the upper part of the age distribution. The total life expectancy in Albania in 2019 was 78.6 years; 77.4 in Bosnia and Herzegovina; 76.9 in Montenegro, 75.8 and 75.7 in N Macedonia and Serbia, respectively (Szymańska,2022) and by UN medium variant is projected to rise another 6 to 7.5 years, respectively, by

2060 (UN, 2024). For comparison, the EU citizen born in 2019 on average was expected to live longer, i.e. 81.1. Using annual data about life expectancy at birth from the World Bank dataset, Szymańska (2022) estimated that from 1960 to 2019, there was a gain in total life expectancy for people born in the Western Balkan region; 17 years in Bosnia and Herzegovina; 16.3 in Albania; 15.2 years in N Macedonia; and 13.1years in Montenegro. According to Eurostat (2025), the largest decline in life expectancy in the Western Balkan region during the period 2011-2021 was recorded in Montenegro, where life expectancy for men decreased from 73.3 to 70.8, and for women from 78.8 to 77.0. Albania also saw a significant decline in life expectancy between 2013 and 2021, falling from 76.0 to 73.6 for men and from 80.1 to 77.7 for women. Between 2011 and 2021, life expectancy for men decreased from 73.1 to 71.1 years and from 77.2 to 75.5 for women in N Macedonia, while in Serbia it decreased from 72.0 to 70.0 for men and from 77.2 to 75.7 for women. No Eurostat data were available for Bosnia and Herzegovina. The most recent data for Kosovo are from 2016 (75.9 years for men, 81.6 years for women). If compared to the EU, the average life expectancy in the EU for men increased slightly by 0.2 years between 2011 and 2021, increasing from 77.0 to 77.2, and the average life expectancy in the EU for women decreased by -0.2 years, from 83.1 to 82.9 years. The rise in the life expectancy implies larger and longer pressure for pensions and healthcare and long-term care and protection for older people as well (Janeska et al. 2018).

5. Socioeconomic consequences of population aging in Albania, Bosnia and Herzegovina and N Macedonia

The consequences of fertility decline and improvement in mortality are not purely demographic but expand much beyond, thus, changes in population age structure may have overwhelming socioeconomic effects (Yin and Bennett, 2012). This impact is multifaceted as it is widely accepted that aging has important macroeconomic consequences. The strongest impact is linked with a sharp decline in the supply of labor, and therefore Grinin et al. (2023b) agreed that this will be the main challenge that economies will face in the context of population aging at present and in the near future. Although the impact of the increasing aging of the workforce can be positive in certain areas as a result of their greater experience and job matching, in general, the aging of the workforce hinders both the introduction of innovation and retraining of the workforce, as well as the opportunities for increasing labor productivity, and reduces labor mobility. There is a negative effect of aging on economic growth rates due to its very different impact on society, especially as a result of the rapid reduction in the number of working hours (Grinin et al. 2023b).

The labour markets in Albania, B&H, and North Macedonia exhibit a persistent mismatch between skills supply and demand, largely attributable to low-quality education and vocational training (VET) systems—a regional hallmark rooted in post-transition legacies and underinvestment (spending <4% of GDP on education vs. EU's 5%). This disconnect, where curricula emphasize outdated theoretical knowledge over practical/digital competencies, contributes to youth unemployment (20-30%) and over-education (22% of workers overqualified, per ETF surveys). Reforms like Macedonia's dual vocational education system (since 2020); Albania's dual VET expansion (piloted 2024-2025) and B&H's employer-engaged standards show promise but require scaling. Hence, skills gap in digital/STEM fields in Albania persist. Informal employment (35%) and emigration exacerbate mismatches; OECD (2023) notes women's near-parity employment (61.7%) but low lifelong learning (5% participation). Reforms via Swiss-UNDP programs aim to accredit 50+ VET schools by 2026, boosting employability by 15-20%. In B&H decentralized education yields fragmented curricula, with 26% of workers facing digital tool introductions unmet by training (ETF 2023). War legacies inflate disability claims, while 41% training participation lags EU's 62%. ILO's EU4Education (2021-2025) fosters public-private ties, targeting 3,000 youth placements, but entity divides hinder progress. In North Macedonia over-education affects 22%, with VET misaligned to manufacturing/ICT needs. Although unemployment fell to 12.5% in 2024, the NEETs remain 15%. Helvetas' E4E@mk (2019-2025) promotes dual VET systems, certifying 5,000+ annually, yet emigration drains skilled youth. ETF metrics show variance in unemployment by education (high school: 15% vs. tertiary: 8%), urging targeted upskilling. Addressing this demands integrated policies: curriculum modernization, employer incentives, and monitoring via ETF indicators, with country studies quantifying ROI on VET investments.

Long term care for older people

There are no unified systems for long-term care in the Western Balkans. Instead, the components of such care are distributed across the social protection and health care systems. In the region, social protection is considered the primary source of long-term care, while health care is considered a complementary activity (Dakić et al.2023). In practice, the availability of social protection services in local communities largely depends on funding from central budgets, as past experiences in the region show. Funds from general taxation, primarily from central budgets, play a dominant role in financing long-term care services. It is important to note that the financing of long-term care has an increasing share in the public expenditures of local governments. Mandatory insurance funds are mainly focused on providing health care, while private insurance is not yet widespread practice (Dakić et al.2023). Citizens throughout the region of Western Balkans directly participate with their own money in the provision of health and social services. North Macedonia has umbrella regulations at the central

level for both social assistance and health care. The regulation of long-term care in Bosnia and Herzegovina is subordinated to a complex state-administrative system, but the assessment of needs is centralized.

Albania

In view of the rapidly growing demand for long-term care and the lack of potential care supply, Albania faces the upcoming policy challenge of ensuring access to affordable and quality care services for all older persons in need, ensuring a care workforce, both formal and informal, and creating sufficient fiscal space to finance the costs of long-term care services. As a first systematic policy response, Albania adopted the Law on the National Plan on Ageing 2020-2024 (IOM, 2022). The plan sets out policy objectives that are in line with relevant EU policy and actions to achieve them. The plan will certainly contribute to improving the existing long-term care system in Albania, but even its full implementation may not fully close the significant gap in access to adequate long-term care services. In particular, there is a strong need to develop support mechanisms for home-based care. There is an additional need to invest in public infrastructures for long-term care services to minimize gaps and regional inequalities. Albania does not have a separate social protection branch dedicated to long-term care. Currently, long-term care services for older persons are mainly provided as social welfare services organized at the municipal level. For example, in 2021, in Albania, 50 types of social services were provided for older persons by 43 institutions (ILO, 2022). Of these, 42 percent of the services were provided by public institutions, while 58 per cent of them were provided by private institutions. For the services provided by public institutions, 43 percent were financed by municipalities, 38 percent were financed by the state, and 19 percent were financed by both municipalities and the state. For services provided by private institutions, 35 percent were funded by non-governmental organizations, 31 percent were funded by international organizations, and 24 percent were funded in a mixed method. By type of service, 32 percent were community-based services and 26 percent were residential services, followed by emergency services (16 percent) and family services (14 percent), (ILO, 2022). Other types of services include specialized services, consultations, alternative care, pre-social services, which account for a total of 12 percent.

N Macedonia

The National Strategy for the Elderly for 2010-2020 is still the main strategic document, especially for long-term care. The overall vision in the strategy emphasizes improving the quality of life of older persons, improving their socio-economic status, access to resources in the environment and social and societal integration (Gjorgjev, 2021). Long-

term care (LTC) in the Republic of North Macedonia is not provided by a single system, but is partly provided through the social protection and pension insurance system managed by the Ministry of Labour and Social Policy, and partly through the health system under the responsibility of the Ministry of Health. The LTC regime for older persons in the country consists of a combination of rights related to: (i) financial support; and (ii) housing and non-housing services. In addition, informal care represents a significant part of care for dependents. For example, expenditure on illness/healthcare in 2017 amounted to 4.2% of GDP, while expenditure on disability amounted to 1.4%. In addition, the share of informal persons providing more than 20 hours of care per week in 2016 was 35.6%; the majority were women (Gjorgjev, 2021). The increase in the population of older persons in the country has not been accompanied by a corresponding increase in the provision of services (social care or health care; public or private; institutional or community/home). However, an example of good practice is the Gerontological Institute of North Macedonia, which, although a specialized hospital, integrates geriatric, long-term and palliative care. It is clear that residential services in the whole region need to be redesigned to take into account the specific needs of long-term care (Dakić et al. 2023). The capacities of private institutions for housing the elderly in North Macedonia have increased almost threefold compared to 2015. The number of beneficiaries in public institutions has been decreasing in previous years, while the number of those in private organizations is increasing.

Bosnia and Herzegovina

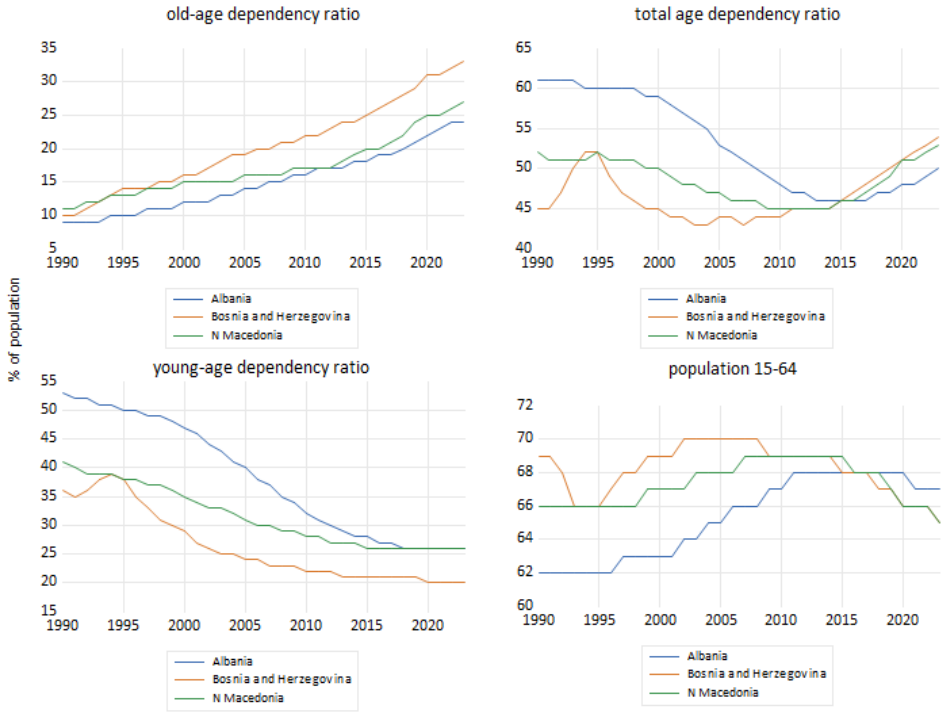
Bosnia and Herzegovina faces the challenge of adequately caring for its aging population - according to the United Nations Department of Economic and Social Affairs, in 2060 people aged 65 and older will represent more than 30% of the total population in B&H, compared to 17% in 2017. By 2050, B&H will rank 4th on the projected list of oldest countries in the world. The capacity of state institutions to address the related challenges to social and health systems is minimal, while high levels of economic migration result in older people being left alone and without direct support from their closest relatives. Home care assistance is not systematic, largely inaccessible and limited to isolated random locations in the country, often without standardization and sustainability (Hilswerk International, 2024). Governments in B&H have adopted some strategic documents in the social sphere that partly deal with long-term care, but they have not been translated into effective policies so far. The aforementioned draft amendments to the FB&H General Law on Social Protection signal that the needs of long-term care providers are being recognized (Jusić, 2019). However, long-term care remains an area that deserves strategic attention. Investment is essential if B&H is to ensure a decent life for all persons in need of care. Comprehensive measures are needed to address the current situation in terms of: 1)

increasing the levels of care benefits; 2) improving the capacity and accessibility of housing; 3) expanding home care and community-based services; 4) integrating health and social services; 5) providing support to informal caregivers; and 6) developing prevention and rehabilitation measures for active aging (Jusić, 2019). Within the health system, long-term care is predominantly available as palliative care, usually provided in hospitals and only for the duration of treatment. Some primary health care or elderly care institutions, usually located in urban areas, may organize home visits; otherwise, services such as community medical care may be provided by international and local NGOs. The social protection laws of the entities and cantons prescribe services such as home care and assistance, day care, or institutional and foster care, but not all include the same services. Community services remain underdeveloped and are often provided by international or local NGOs; this support tends to be project-based, rather than government-sponsored. The financial capacity of administrative units also influences service delivery.

Dependency ratio

The dependency ratio is used to measure the burden of support for older people and children by the working population (Dörflinger, 2025). Thus, the dependency ratio is based on the concept that older people and children are supported to a large extent by the working-age population, either directly, for instance, by family transfers, or indirectly, for instance, via government transfers. The total dependency ratio is decomposed into the youth dependency ratio and the old-age dependency ratio. The youth dependency ratio is expressed as the number of children (aged 0–14) per 100 working-age persons (aged 15–64). The old-age dependency ratio is defined as the number of people aged 65 or over per 100 working-age persons (aged 15–64). Approximately, the economically active are the adult population aged 20-64 providing the goods and services, while the economically non-active are the younger population (babies, school children and students) as well as the elderly population or pensioners (Schoenmaeckers, 2005).

Figure 7: Old-age dependency ratio; young-age dependency ratio; total age dependency ratio and population 15-64 aged: Albania, N Macedonia, and Bosnia and Herzegovina-1990-2023



Source: CRPM design based on World Bank data (2025)

The total dependency ratio globally is expected to likely change in the next decades due to lower fertility and prominent longevity; the youth dependency ratio is projected to continue to decline, while the old-age dependency ratio is expected to continue to grow, at a rapid pace (Yin and Bennett, 2012). Except Albania, the countries of the Western Balkan region showed a decreasing trend in the total age-dependency ratio, even though this trend initially reversed in the 2010s (Szymańska, 2022). For instance, on average, in Albania in 2020, for every two persons of working age, there was about one person of non-working age. The highest ratio of the percentage of people aged 0–14 and 65+ to the percentage of people of working age was in Serbia (52.5%) and Montenegro (51.1%), and the lowest was in N Macedonia (44.5%). Nevertheless, towards the end of the 2010s, the age dependency ratios of these Western Balkan countries were lower than the EU average. Between 1990 and 2000, after a short time of decline in the old-age dependency ratio (except for Serbia), an increase was noticed (Szymańska, 2022). Therefore, after 2000, the dynamics were rapid in Bosnia and Herzegovina but the acceleration was notable for all countries of Western Balkans during 2000-2020. In Serbia, in 2020, for every ten persons of working age, there were three persons over 65. In Albania, Montenegro and N Macedonia, for every ten persons of working age, there were two persons over 65. Since 2015, all countries covered by the research study (Figure 7) have shown a downward trend in the almost constant average share of the working-age population observed in previous years. However, a

shift towards an increase in the demographic dependency ratio of the elderly has been observed throughout the entire observation period for all three countries, due to the significant increase in the number of elderly people in all these countries. Undoubtedly, this fact affects both the production and consumption capacities of the relevant national economies of the Western Balkan countries.

In the second half of the century, the total dependency ratio for the Western Balkans is expected to be the highest of all regions and to double from its initial level by 2100 (Nikitović et al. 2024). The projected acceleration of the increase in the total dependency ratio over the next four decades will be mainly generated by an increase in Serbia, followed by a much larger increase in Albania and Kosovo. The key driver of the increase in the total dependency ratio is the increasing "pressure" of people over 65 on the working-age population (15–64), as expressed in the old-age dependency ratio (OADR). While this indicator is expected to double in Western and Eastern Europe by 2100, it will almost triple in the Western Balkans. By far the largest increases in OADR are projected in Kosovo (6.3 times) and Albania (4.7 times), and the reason is undoubtedly the very young age structure of the population, especially in Kosovo. By 2060, the old-age dependency ratio in the Western Balkans (57%) will likely be very far to the youth dependency ratio (22%), whereas in 2022 the average level of OADR for the Western Balkans (26%) was only at the same approximate level as of the average YADR (24%), with some larger variations for Serbia (32% and 22%) and Kosovo (15% and 31%), respectively, (Nikitović et al. 2024). The calculations of Nikitović et al. (2024) based on data from the UN's medium-case projection scenario show that the old-age dependency ratio in the Western Balkans will double from its 2022 level in 2060, while the youth dependency ratio will remain broadly similar to that in 2022. Thus, over the next 30–35 years, as baby boomers move towards the top of the age distribution, the old-age dependency ratio in the Western Balkans is projected to grow even faster, to 57% in 2060, far exceeding the projected youth dependency ratio of 22% that year. Among the Western Balkan countries, the old-age dependency ratio for Bosnia and Herzegovina is expected to double from its current level in 2022 to around 56% in 2060, but the youth dependency ratio will remain roughly the same, at 21% in 2060. The old-age dependency ratio for N Macedonia and Albania is projected to increase from 2022 (22% and 25% respectively) to more than double in 2060, i.e. 56% and 62%, respectively for N Macedonia and Albania. The young-age dependency ratio in N Macedonia and Albania will decrease in 2060 to 21% and 20%, respectively, compared to 2022 levels of 23% and 24%, respectively for N Macedonia and Albania.

Demographic dividend

The beneficial effect of the changes in the age structure after fertility decline causing economic growth is known as a demographic dividend (Crespo et al. 2014). According

to Crespo et al. (2014) the introduction of the concept of the demographic dividend was an important step forward in untying the Gordian knot of the relationship between demographic change and economic growth. Thus, the modern literature on the demographic dividend focuses on the relationship between the changes in age structure and economic growth. Crespo et al. (2014) originally introduced age as a relevant catalyst of the demographic dividend and other potential catalysts of the demographic dividend that play an important role accordingly are also the labor force participation and the level of educational attainment. Countries at all levels of development experience significant changes in their population age structure. Many countries in the world have experienced a sustained increase in the share of their working-age populations and the result has been a "demographic dividend" that has helped to raise economic growth (Mason and Lee, 2012). The demographic dividend presents a period when the proportion of the working-age population (15-64 years) increases relative to dependent groups (elderly and children). Theoretically, this favorable age structure should contribute to larger economic growth by increasing labor supply, raising savings, and lessening pressure on educational systems (Wong and Carvalho, 2006). Some of the countries or parts of the Western Balkan even now begin to experience a significant population aging process. The current age structure has a negative effect on the size of the population of the Western Balkans, considering that the demographic transition has long been ended in most parts of the region. Only the populations in Albania and Kosovo are characterized by a positive impact of the current age structure, as they entered the low fertility phase notably later than the rest of the Western Balkans region (Nikitović et al. 2024). Yet, due to the lower TFR during the transition, the positive momentum in Albania would end already by 2035 and would be completed earlier than in Kosovo.

Viability of public pensions systems

By comparing the earliest pension age and life expectancy in a given country and by approximate estimation of the number of beneficiaries and the pension costs for an average beneficiary, it is possible roughly to estimate the financial pressure on the system. In some of the Western Balkan countries, the number of years a person can be expected to be active in the labor market is increasing, for instance, in N Macedonia from 31 years in 2006 and in Montenegro, from 27.8 years in 2011 to 31 years in N Macedonia and 31.2 years in Montenegro, respectively, in 2016 (Janeska et al. 2018). It was observed that the duration of working life is longer for men than for women, although the differences between men and women are narrowing. Thus, by 2050, if the age at pension eligibility will not be modified, then as a consequence of the universal improvements in life expectancy it is expected the duration that a person with his or her country's life expectancy use pensions will be significantly longer than is the case nowadays. In countries such as the United States, where the pension system is of the

pay-as-you-go variety, population aging can present significant problems. In December 2021, an estimated 65.2 million people received Social Security benefits in the United States, an increase of 2.3 million (3.66%) compared to December 2018. One explanation for the increased number of retirees was that a large population of baby boomers had reached retirement age (Chen et al. 2024). The baby boom generation had low fertility rates compared to their parents. This, combined with the fact that mortality in old age continues to improve, implies that the ratio of beneficiaries to workers contributing to the system will increase rapidly as baby boomers claim Social Security benefits.

Thus, the decision to retire varies according to economic and demographic factors, as well as individual factors. In the case of the US context, higher local unemployment rates were related to a higher probability of retirement (Chen et al. 2024), for example, 10% of baby boomers retired after being laid off and not finding a new job. Theoretically, households aim to achieve as much utility as possible by smoothing their spending and savings over their lifetimes and making retirement decisions after taking into account economic and individual factors. As stated by Grinin et al. (2023b), the pension crisis in the welfare state has already detected and is approaching and accordingly, it will become especially severe in case of major collapses in the securities markets where pension funds are invested, as well as possible state failure to pay. Those funds that are invested in public debts of developed countries may already be considered as spent funds. Because economic growth is weak and the looming debt crisis could be very serious, the pension system is becoming hostage to the general economic situation. The changing demographic outlook may also require individuals to reconsider social and financial decisions, such as labor force participation, saving and investment, education, marriage, childbearing, and living conditions, in the context of smaller families and longer life expectancies. Recently the socioeconomic consequences of changing age structures have attracted considerable attention from policymakers.

Challenges for future policies will without question include maximizing social and economic well-being in the face of profound demographic transformation. In this context, experiences from the challenges of demographic aging and active aging policies in Europe (e.g. Márquez-López, 2023) impose active aging as a concept whose main priority is to guarantee the rights of older people to stay healthy by reducing health and social care costs and to work much longer to reduce pension costs and at the same time participate in political and social activities. Furthermore, to achieve inclusive environments that prioritize the welfare and dignity of the aging population, Agnihotri (2023) speaks for a universal social pension globally, which refers to a comprehensive and practical application of a social welfare program created to provide financial support to all elderly within a given population, regardless of their

employment history, socio-economic status, or any other criteria. This concept is based on the principle of universality, emphasizing that every individual reaching a certain age is entitled to receive a pension, which reflects an obligation to ensure economic security for older people in society.

The public pension systems in Albania, Bosnia and Herzegovina (B&H), and North Macedonia face significant viability challenges, driven by structural demographic shifts and labour market dynamics common to the region. These include a shrinking contributory base—intensified by high youth emigration, informal employment, and low formal participation rates—and an expanding pool of beneficiaries who benefit from increased life expectancy (now averaging 78-80 years across the region, per World Bank data). In Albania, for instance, the dependency ratio (pensioners per 100 contributors) has deteriorated from approximately 50 in the mid-1990s to over 77 by 2020, projected to reach 120 by 2032 due to out-migration of working-age individuals. Similar trends in B&H and North Macedonia, where post-war legacies and economic transitions have left legacy pensioners with limited new contributors, result in persistent deficits. Pension expenditures now consume 6-8% of GDP in these countries, up from 4-5% in the early 2000s, straining public finances amid fiscal pressures from debt servicing and post-COVID recovery.

These mechanisms generate cascading macroeconomic consequences. Pension deficits—financed through state budget subsidies—have extended, reaching 2.7% of GDP in Albania (2020) and 3-4% in B&H and North Macedonia, crowding out investments in infrastructure, education, and health. This increases public debt (e.g., B&H's external debt at approximately 30% of GDP) and elevates financing needs, often met via borrowing, which raises interest rates and hampers growth. Interdependencies are the following: low replacement rates (40-45% of average wages) erode household savings and consumption, while gender twists in coverage (e.g., lower female contribution histories due to informal work) perpetuate inequality, reducing overall labour productivity. Without reforms—like parametric adjustments to retirement ages or multi-pillar shifts—these systems risk insolvency by 2040, per EU Ageing Reports, amplifying fiscal vulnerabilities and social unrest in aging societies where over-65s will exceed 25% of the population by 2050.

The following table outlines the structure of pension systems in the three countries, emphasizing old-age income security (contributory vs. non-contributory pillars), coverage gaps (e.g., informality, gender twists), disability/survivors' benefits, and healthcare access. Data draws from national social insurance institutes, World Bank reviews, and ILO assessments (2020-2023). This provides a high-level comparative framework for the background section, with deeper country-specific analyses (e.g., post-war adaptations in B&H) reserved for dedicated studies, ensuring feasibility within the paper's scope.

Aspect	Albania	Bosnia and Herzegovina (B&H)	North Macedonia
Overall Structure	PAYG contributory (Pillar I, compulsory); voluntary private funded (Pillar II); non-contributory social pension (Pillar 0).	PAYG contributory (Pillar I, entity-level: FB&H/RS); voluntary private (Pillar III). Post-war harmonization via state framework.	PAYG contributory (Pillar I, generational solidarity); mandatory funded (Pillar II); voluntary funded (Pillar III).
Contributory vs. Non-Contributory	Contributory: Earnings-related old-age/disability (15-35 years' contributions). Non-contributory: Means-tested social pension for 70+ without income (app.€50/month, covers c.ca 20,000 elderly).	Contributory: Earnings-related (15+ years). Non-contributory: Limited; war veterans/disabled get state supplements (10-20% increases).	Contributory: Earnings-related (15+ years). Non-contributory: Minimum pension guarantee (c.ca €150, covers low earners); no broad social pension.
Coverage (% of Population 65+)	App. 85% contributory (665,900 pensioners in 2023, 18% of pop.); gaps in informal/rural (40% uncovered). Mean contribution: 21.6% of wage (9.5% employee, 15% employer).	90% contributory (500,000 pensioners, 15% of pop.); entity variations. Mean: 17% employer (FB&H). Gaps: 39% elderly uncovered due to war disruptions.	C.ca 95% contributory (325,000 pensioners, 16% of pop.). Mean: 18.8% of wage. Gaps: Emigration skews base (low contributions).
Main Coverage Gaps	Low formal employment (56% rate); gender skew (women 20% less registered due to informal care); no social pension pre-2015 left rural elderly exposed.	Post-war: Disability claims inflated (pre-retirement pensions); informal work (30% economy); male bias in registration (war service credits).	Informality (35%); youth emigration reduces base; female under-coverage (15% gap from part-time/low-wage jobs).
Disability & Survivors' Benefits	Disability: Partial/total, 75% coverage years; supplements for attendance. Survivors: 25-50% of deceased's pension (widows 55+, orphans <18).	Disability: Work-related, entity-assessed; high war claims. Survivors: 25% per child/orphan; widows 50+ or disabled.	Disability: Injury/illness-based, rehab/compensation. Survivors: 25-50% (family pension for <15-year contributors); orphans full if no parents.
Healthcare Access (Old-Age Link)	Universal via Health Insurance Institute (3.4% contribution); primary/secondary free for pensioners, but rural gaps (20% uninsured). No major cross-country differences.	Compulsory entity funds (12.5% contribution); free primary/secondary for pensioners, but war veterans prioritized; access uneven (rural 15% gap).	Mandatory 7.5% contribution; free primary/secondary for insured elderly; full coverage for minimum pensioners; minor rural disparities.

This table highlights commonalities (e.g., PAYG dominance, informality gaps) while noting divergences (e.g., B&H's war legacies). For country studies, we commit to expanding on post-war non-contributory expansions in B&H (e.g., veteran benefits) and gender-disaggregated coverage modelling in Albania/North Macedonia, using longitudinal INSTAT/MoLSP data to quantify implications for fiscal sustainability. The subsequent tables fill the requested main indicators, compiled from national

statistical offices (INSTAT, BHAS, SSO), World Bank Pension Reviews (2020-2023), and EU Ageing Reports. Where data gaps exist (e.g., pre-2000 due to transitions/wars), estimates are noted based on interpolated trends; full datasets will inform country chapters.

Albania: Main Indicators/Year

Indicator	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2023**	**2025 (Proj.)**
Share of pensioners/total population (%)	12	14	15	16	17	18	18.5	19
Percentage of social insurance contribution/wage (%)	20	20	21.4	21.6	21.6	21.6	21.6	21.6
Formal age of retirement (men/women)	60/55	60/55	60/55	62/57	63/58	65/60	65/60	65/60
Dependency ratio (pensioners/contributors)	50:100	60:100	65:100	70:100	74:100	77:100	80:100	82:100
Subsidy from state budget to social insurance (% of GDP)	1.8	1.9	2.0	2.2	2.5	2.7	2.8	2.8-3.0
Replacement rate (avg. old-age pension/avg. wage, %)	45	44	43	42	41	40	40	39-40
Pension deficit (% of GDP)	1.0	1.2	1.5	1.8	2.0	2.5	2.7	2.7-2.8

Bosnia and Herzegovina: Main Indicators/Year

Indicator	**1995**	**2000**	**2005**	**2010**	**2015**	**2020**	**2023**	**2025 (Proj.)**
Share of pensioners/total population (%)	10 (est.)	12	13	14	15	15.5	16	16.5
Percentage of social insurance contribution/wage (%)	N/A	18	18	17 (FB&H)	17	17	17	17
Formal age of retirement (men/women)	65/60	65/60	65/60	65/60	65/60	65/60	65/62	65/62
Dependency ratio (pensioners/contributors)	60:100 (est.)	70:100	75:100	80:100	85:100	90:100	92:100	94:100
Subsidy from state budget to social insurance (% of GDP)	N/A	2.5	3.0	3.2	3.5	3.8	4.0	4.0-4.2
Replacement rate (avg. old-age pension/avg. wage, %)	50	48	46	45	44	43	42	41-42
Pension deficit (% of GDP)	N/A	2.0	2.5	3.0	3.2	3.5	3.8	3.8-4.0

North Macedonia: Main Indicators/Year

Indicator	1995	2000	2005	2010	2015	2020	2023	2025 (Proj.)
Share of pensioners/total population (%)	11	13	14	15	15.5	16	16.5	17
Percentage of social insurance contribution/wage (%)	21.2	20	19	18	18.4	18.8	18.8	18.8
Formal age of retirement (men/women)	60/55	62/57	63/58	64/61	64/62	64/62	64/62	64/62
Dependency ratio (pensioners/contributors)	55:100	65:100	70:100	75:100	80:100	85:100	88:100	90:100
Subsidy from state budget to social insurance (% of GDP)	2.0	2.5	2.8	3.0	3.2	3.5	3.7	3.7-3.8
Replacement rate (avg. old-age pension/avg. wage, %)	48	47	46	45	44	43	42	41-42
Pension deficit (% of GDP)	1.5	1.8	2.0	2.2	2.5	2.8	3.0	3.0-3.2

These indicators underscore the urgency of reforms: rising shares of pensioners and deficits signal unsustainable trajectories, with subsidies now estimated at 3% of GDP on average. Country studies will model scenario-based projections (e.g., via PuLP optimization for contribution adjustments) to explore mitigation strategies.
In most Western Balkan countries, the World Bank has played a central role in shaping and implementing pension system reforms. Drawing on World Bank data, the following fiscal projections and reform recommendations are presented:

Albania

- Fiscal Projections (2025-2027): Economic growth is projected at 3.2% in 2025, down 0.3 points from prior estimates, rising to 3.5% in 2026 (World Bank, Spring 2025). Fiscal deficits are expected to widen slightly to 2.5-3% of GDP in 2025 due to increased pension and social benefit spending, with public debt stabilizing at ~60% of GDP. Pension deficits, at 2.7% of GDP in 2023, are projected to remain stable short-term due to wage-driven contribution increases but face medium-term pressure from aging and outmigration.
- World Bank Suggestions: The World Bank emphasizes improving coverage (only 85% of 65+ covered), addressing low contribution levels (many at minimum wage), and ensuring system fairness (e.g., gender equity). Recommendations include:
- Strengthening actuarial models for long-term sustainability, as outlined in the upcoming Public Finance Review (end-2024) (web:9).

- Balancing adequacy, affordability, and contribution incentives via parametric reforms (e.g., gradual retirement age increases beyond 65/60).
- Expanding non-contributory social pensions for the uncovered 15% of elderly, particularly rural women.
- Complementing contributory pensions with social protection instruments (e.g., unemployment benefits, poverty alleviation) to reduce system strain (web:9).
- Promoting formalization to boost contributions, leveraging EU accession reforms like SEPA integration.

Bosnia and Herzegovina (B&H):

- Fiscal Projections (2025-2027): Growth is forecasted at 2.7% in 2025, down 0.5 points, with a slight uptick to 3% in 2026 (web:5). Fiscal deficits rose in 2024 to ~3.5% of GDP due to higher social spending, including pensions (4% of GDP in 2023), and are expected to persist at 3-3.5% through 2027 amid political instability and weak revenue. Public debt is projected to hover at 30-35% of GDP, with pension deficits (3.8% of GDP in 2023) straining budgets.
- World Bank Suggestions: The Bank highlights the need to address entity-level fragmentation and post-war distortions (e.g., inflated disability claims). Key recommendations include:
- Harmonizing entity-level pension systems (FB&H/RS) to reduce administrative costs and coverage gaps (39% of elderly uncovered).
- Reforming disability and veterans' benefits to curb misuse, which inflates deficits.
- Enhancing contribution collection by tackling informality (30% of economy) and integrating labour market reforms to boost employment, particularly for women (web:4).
- Strengthening social protection systems to support green transition jobs, reducing pressure on pensions by diversifying income sources.

North Macedonia:

- Fiscal Projections (2025-2027): GDP growth is projected at 2.6% in 2025 (up 0.1 points), 2.7% in 2026, and 2.8% in 2027 (web:8). Fiscal deficits, at ~3.5% of GDP in 2024, are expected to stabilize at 3-3.2% through 2027, driven by pension expenditures (3.7% of GDP in 2023) and public wage hikes. Public debt is projected to remain at ~50% of GDP, with pension deficits (3% of GDP) posing medium-term risks.
- World Bank Suggestions: The Bank advocates for sustaining the multi-pillar system (PAYG + mandatory funded) while addressing coverage gaps and emigration:

- Enhancing Pillar II (mandatory funded) to reduce PAYG reliance, ensuring long-term sustainability.
- Increasing contribution rates (currently 18.8%) and formal employment (65% rate) to stabilize the contributory base.
- Expanding minimum pension guarantees for low earners, addressing the 5% uncovered elderly.
- Aligning pension reforms with EU accession goals, such as improving governance and market competition, to support fiscal resilience.

6. Demographic dynamics, socioeconomic impact, policy responses and existing reforms

There is an extensive body of literature analyzing the relationship between demographic dynamics and fertility, mortality and migration patterns. Using the longest time series covering the years 1960–2020, the research study by Šimanska (2022) presented the range of demographic changes and the progress of population aging in the Western Balkan countries based on data analysis and cluster analysis. The results indicate the progress of demographic changes and aging in the entire region. A comparison of the estimated indicators showed that the demographic structure in the Western Balkan region has changed towards "old", with the share of people aged 65 and over exceeding 14% in 2020. The most advanced stages were associated with Bosnia and Herzegovina, where the change from a "young" demographic structure to an "old" one was very dynamic and extensive.

The United Nations Population Projections - WPP2022 are the most detailed, comprehensive and well-organized set of world population projections compared to other international organizations that produce this type of forecast, knowing also the fact that in their calculations all other organizations depend on historical data series by the UN (UN, 2022). According to several deterministic scenarios for the future total population of the Western Balkans in the period 2022–2100, provided by WPP2022, the most important inference that can be seen from the data is the trend of decreasing population size in the Western Balkans, which started after 1990 and will continue until the end of the century. Only a completely hypothetical scenario, assuming that the net reproduction rate will remain identical to one all the time, and net migration equal to zero, will guarantee the maintenance of the current population size. Thus, according to the medium scenario, the current total population in the region may halve by 2100. The most likely trajectory of TFR, according to the medium scenario according to the results of WPP2022, is predicted a slight increase or stagnation of TFR in the future for the countries of the Western Balkans region, which would lead to a reduction of the

current differences between countries. Thus, according to WPP2022, the current TFR range in the region of 1.35–1.68 is expected to reach a level of 1.57–1.65 by the end of this century. The greatest decline in the population size of the Western Balkans region in all scenarios by 2100 would be originated from the role of (low) fertility.

As claimed by a recent survey in Marchais (2023), 83.7% of students in N Macedonia wanted to leave their country, 8.3% were hesitant, and only 7.9% were determined to stay in the country, while another survey carried out in Serbia in the fall of 2018 showed that 34% of young people between the ages of 18 and 34 hoped to emigrate. Additionally, as found in Marchais (2023), in 2018, around 367,000 Albanian citizens (representing 14% of the total population in the country) participated in the "Green Card lottery" in the hope of securing a permanent residence card in the United States. In addition, according to the report of the Kosovo Agency of Statistics, 170,000 citizens, or only around 10% of the total population of Kosovo, left the country between 2013 and 2017 alone. Those leaving the Western Balkans mostly move to EU countries, mainly Germany, far ahead of Italy, Slovenia and Austria, and not so much to the US (less than 5% of the inflow). Relatively few people from the Western Balkans move to France; in 2021, only 1.3% of immigrants living in France were born in Serbia, 0.5% in Albania and around 0.2% in Bosnia and Herzegovina (Marchais, 2023).

Karella et al. (2024) analyzed the objective and subjective impact of economic conditions in three time periods in Albania: before migration, while living in the host country and after their return on returnees' remigration intentions, based on data from the 2013 Albanian Return Migration and Reintegration Survey. Their results demonstrate that both objective and subjective economic conditions have a significant influence on returnees' remigration intentions. Specifically, inactivity and unemployment had a negative effect on remigration plans if experienced while living in the host country, but their effect became positive if experienced after returning to Albania. Karela et al. (2024) also found that constant unemployment is one of the most important reasons for returnees' remigration intentions. Usually, explications of the prevalence of males in migration flows, especially at the beginning, when males set up the majority and females are mostly tied migrants, focus on the role of inequalities both at the macro and structural level as well as at the micro, household level.

In this regard, Stecklov et al. (2010) used micro-level data from the Albania 2005 Living Standards Measurement Study, which included migration histories for family members since migration started. Based on discrete-time hazard models, the analysis showed a dramatic increase in male migration and a gradual and non-identical expansion of female participation in this international migration. Stecklov et al. (2010) found that household-level constraints and incentives affect male and female migration differently, however, during this period, women's migration behavior

appears to be more directly aligned with household-level factors, and there was little evidence to suggest that increased female migration signifies increased behavioral independence among Albanian women. Over time, at certain periods, female migration even increased relative to male migration, but there was no evidence of a secular increase in the share of female migrants over the 15-years of analysis. Furthermore, since absolute levels of female migration generally increased, no evidence was found that this was the result of reduced discrimination against women. The lack of female participation in migration appears to be related to high levels of inequality that exist within households themselves, and it is evident that the level of public gender equality does not seem to be able to compensate for low levels of female empowerment within households. However, findings from Steklov et al. (2010) analyses suggest that changes over time indicate that Albanian women's migration remains firmly rooted in the decision-making process of others.

Albania faces mounting labour shortages driven by high emigration rates of its working-age population, which employers increasingly offset through hiring foreign nationals. Albania hosted around 48,800 international migrants in 2020 (IOM's Migration Governance Indicators profile, 2023) with inflows steadily rising in the past decade. The Ministry of Finance and Economy has noted that most foreign workers come from neighbouring Balkan countries (notably Kosovo, North Macedonia, and Turkey), but also from Asian countries such as Bangladesh, India, and the Philippines. They are concentrated in agriculture, construction, hospitality, and personal services, sectors where labour demand outpaces the domestic supply. This reliance on foreign workers is becoming an important mechanism to sustain Albania's growth model, particularly in tourism and seasonal agriculture.

Bosnia and Herzegovina has seen the sharpest growth in foreign labour recruitment among the three countries. Official data show that the number of work permits issued rose from 2,197 in 2014 to 4,586 in 2023, a doubling within a decade. The top origins of foreign workers are Serbia, Turkey, China, Croatia, alongside an accelerating inflow from Nepal and Bangladesh (IOM's Migration Governance Indicators profile, 2023). Sector-wise, construction dominates, absorbing thousands of foreign concrete workers, carpenters, and other skilled and unskilled trades, followed by manufacturing, hospitality, and retail. Employers' surveys conducted by IOM highlight persistent shortages of skilled technicians and seasonal service workers, with foreign recruitment increasingly seen as the only short-term solution.

North Macedonia also contends with labour shortages caused by demographic decline and out-migration, and while official statistics are less granular than in B&H,

government reports show that several thousand work permits are issued each year. The main groups of foreign workers come from Albania, Serbia, Kosovo, and Turkey, while more recently workers from South Asia are entering the market (IOM's Migration Profile, 2023). These migrants predominantly fill gaps in construction, agriculture, textile manufacturing, and tourism services, sectors hardest hit by worker outflows. N. Macedonia is working on legislative changes to increase the number of permits for foreign workers annually as reliance on imported labour is gradually expanding. The country recently changed the Law on foreigners, and adopted a Law on work engagements that regulate more flexible work and respond to the structural labour shortages.

Remittances remain a central feature of migration dynamics in the Western Balkans, with important implications for household welfare, external balances, and resilience to shocks. In Albania, where approximately 1.4 million citizens live abroad—predominantly in Greece and Italy—remittances have consistently outstripped FDI and ODA as sources of foreign exchange, at times representing 10–20% of GDP before the 2008 financial crisis, and still providing lifeline income for nearly a quarter of households today (UNDP, 2024). In Bosnia and Herzegovina, remittances are also sizeable but largely consumed rather than invested, with only 3.6% directed towards business development and a negligible share into new ventures, limiting their transformative effect on growth (UNFPA, 2020). North Macedonia exhibits a similar macroeconomic dependence, with inflows averaging over €1 billion annually since 2009—roughly 16% of GDP—helping sustain the current account balance (NBRNM, 2020). These patterns echo earlier experiences in Central and Eastern European countries (CEECs), where large-scale labour migration prior to EU accession generated high remittance inflows that gradually shifted as EU membership enabled return migration and freer circulation of skills (Strielkowski et al., 2012). Evidence from the Czech Republic and other CEECs suggests that, over time, the combination of remittances, returning migrants, and acquired skills can reinforce both household consumption and productive investment, indicating that the prospective benefits of EU accession for the Western Balkans could include not only stable remittance inflows but also a reversal of migration flows and enhanced human capital spillovers, as observed in the first decade after enlargement. Gendered social norms in Albania have strongly shaped migration patterns since the early 1990s. Traditionally, migration was male-dominated, with men perceived as primary breadwinners and women expected to maintain households. However, after the 1997 crisis, a distinct feminization of migration emerged: many women migrated independently to Italy and Greece, often employed in domestic and care work, a reflection of both limited local opportunities and global care demand (Danaj, 2022; Vullnetari & King, 2011). UNDP data confirm that Albanian households relying on remittances often depend on female migrants' earnings in low-paid but stable sectors abroad. Despite their growing role as economic actors, women migrants are still

constrained by patriarchal expectations around family responsibilities, with many reporting “double burdens” of providing remittances while also being responsible for caregiving upon return.

In North Macedonia, patriarchal gender norms similarly influence who migrates, why, and under what conditions. The UN Women Gender Equality Profile (2023) highlights persistent expectations that men should seek employment abroad, especially in construction and heavy industry, while women’s migration is more often linked to family reunification, seasonal care work, or marriage migration. Hence, the official statistics shows that Macedonian emigration to developed economies (where most of the diaspora lives) is balanced indicating a ratio of 52.4% men and 47.6% women (SSO, 2022). While remittances are important for household survival, female migrants’ contributions are often undervalued or invisible, reinforcing the stereotype that migration is primarily a male sphere. At the same time, restrictive childcare and unequal domestic workloads at home discourage many women from considering independent labor migration, limiting the potential diversification of migration flows.

Entrenched gender roles in B&H heavily influence migration, as well. Men are socially expected to migrate for work, particularly to EU countries, while women’s migration is often associated with family strategies—caring for elderly relatives abroad or joining spouses. This results in men being overrepresented among labor migrants in sectors such as construction and transport, while women migrants from B&H are concentrated in care, cleaning, and service jobs. Studies show that women’s remittances are more likely to be used for household consumption (WIIW,2021) and education, while men’s are channeled into construction or investment, reflecting gendered financial decision-making (Nermin Oruc, 2011).

For a lot of countries experiencing demographic aging, the fiscal impact of aging has become an important subject matter in the extant economic and demographic literature. An important strand of economic and demographic literature investigates the role of population aging on the pension system sustainability. For instance, data for Serbia points out that Serbia may soon have more pensioners than working-age persons (Ármás, 2023). Therefore, the support ratio of Serbia, i.e. the ratio between contributors and pensioners is one of the lowest in Europe, comparable with the ones found in Bosnia and Herzegovina (Reyes, 2022). Furthermore, the contribution rate of Serbia is one of the highest compared with OECD and EU member states, thus the latest reduction in half of a percentage point to 25.5 percent would bring it to the same level as noticed in France. In addition, among the Western Balkan countries, pension expenditures in Serbia are the highest, but are lower than many EU countries and below the EU average of 12.5 percent of GDP (Reyes, 2022).

Regressive taxation does little to mitigate high levels of wage inequality in the Western Balkan's labor market. Social protection has modest redistributive effects, especially through pensions (Bartlett and Uvalić, 2022); but even after redistribution, inequality and poverty remain high compared to the EU. High levels of unemployment are the basis for large-scale migration, especially from countries with a small manufacturing base such as Albania and Bosnia and Herzegovina or Kosovo. This has resulted in informal or privatized social protection in the form of large inflows of remittances from migrant workers to their families back home (Bartlett and Uvalić, 2022). Overall, Western Balkan countries nowadays have 13 percentage points lower social protection expenditure than EU countries, with a high concentration on pensions rather than on other social protection targets such as unemployment benefits, family benefits, social assistance, housing and social inclusion, which are at very low levels in the Western Balkans (Bartlett and Uvalić, 2022). For example, social protection expenditure excluding pensions represented, on average, 2% of GDP in Albania in 2022. These expenditures finance benefits for unemployment insurance, programs for social assistance and disability, compensation for ex-political prisoners, and baby bonuses (UNDP, 2024). Thus, pension expenditure as a percentage of GDP is around 20 percentage points higher in Albania, Bosnia and Herzegovina, Montenegro and N Macedonia than in the EU, but it should be noted that pension expenditure in Serbia has been constrained by World Bank austerity measures imposed in the mid-2010s.

In most Western Balkan countries, pension spending is much greater than in the new EU member states, representing around 10 percent of GDP and around a quarter of total government expenditure (Kocan, 2015). Due to financing constraints, pensions in the Western Balkan region are low relative to subsistence needs. The public pension scheme is the dominant system with mandatory contributions on a “pay-as-you-go” basis (the first pillar), covered by all workers in the formal economy. However, low employment and participation rates, an aging population and high informality in the economy threaten the sustainability of such systems. In addition, the widespread practice of early retirement that accompanied the privatization and restructuring of enterprises in the region has further worsened the situation of pension systems. To some extent, N Macedonia transformed the inherited redistributive universal pension systems into selective contributive systems, where now the second pillar substitutes partly the first pillar of social security pension. Third-pillar voluntary private pensions function in N Macedonia, Serbia and Montenegro, but have only a small-scale role. Early pension reforms in Bosnia and Herzegovina focused on harmonization between the two entities, while the implementation of the new law on privileged pensions in the Federation focused on reducing benefits, increasing the number of contributors, and rising the effective retirement age. The relatively lighter pension burdens in Albania and Kosovo are explained by their younger populations, although low employment rates and high levels of informality in the economy in Albania and Kosovo will

contribute to increasing pressures as the population ages (Kocan, 2015). In 2002, a combined first- and second-pillar pension system was designed in Kosovo. In Albania, there was a reduction in the contribution rate, as well as unfunded benefit increases, but incentives for underreporting income led to a widening deficit in the social security system.
According to the projections of pension expenditures in N Macedonia, after 2030, a more pronounced decrease in the proportion of pension costs allocated by the Budget is expected, when it is expected to drop below 6% in the period before 2050, and in the period from 2050-2060, it is expected to range between 4% and 5% (Miladinov, 2017). The ratio between insured persons and pensioners is projected to decrease significantly after 2030, and before 2050, i.e. around 2048, this ratio is expected to be 1.2 insured persons per 1 pensioner, so that by 2060 the critical level of the ratio of 1 insured person per 1 pensioner is reached (Miladinov, 2017). Additionally, according to the obtained projections for the financial sustainability of the pension system by the work of Miladinov (2017), a significant trend of stabilization and movement towards achieving financial equilibrium is observed already from 2040-2045 to 2060, when it is expected that the volume of contributions collected from workers will approach the amount of pensions paid to retired persons. Thus, already in 2050, a significant reduction (more than a double decrease) of the deficit is expected compared to the period until 2020-2030 (Miladinov, 2017).

The proportion of pensioners in the total population in Albania increased from 19% in 2010 to 24% in 2022. Long-term projections based on birth rates and migration trends in Albania show that the proportion of the population in retirement will increase to 29% by 2031 and to 32% by 2080 (UNDP, 2024). Therefore, total pension expenditures and revenues in Albania almost doubled in 2022 compared to 2010, making the pension deficit more than double the 2010 level. The ratio between contributors and beneficiaries will increase from around 86 pensioners per 100 contributors in 2012 to around 120 pensioners per 100 contributors in 2032 (Musabelliu, 2021). This ratio will then remain above this level until the end of the projection period, recording a slight decrease in 2080, where this ratio will be 118 pensioners per 100 contributors. Population ageing will lead to an increase in the old-age dependency ratio, from 23% in 2012 to 41% in 2030, reaching 56.8% in 2055 and reaching a peak of 68.9% in 2080 (Xhumari, 2020). Such an increase in the old-age dependency ratio will make the current pension system in Albania financially and demographically unaffordable.

Population aging can decrease labor supply, lessen labor productivity, impact the competitiveness and ability to innovate, and drive investment out, and all of it can place a risk of development slowing and limit on future economic growth from the

economic accumulation point of view (Yang, 2024; Marchais, 2023). The emigration of great number of healthcare workers including doctors and nurses and a lot of other highly skilled persons is a matter of great concern in the Western Balkan region (Marchais, 2023). Additionally, the labor shortage is already intensely felt in various sectors, e.g., healthcare, ICT, and advanced manufacturing within all three countries (OECD Competitiveness Outlook, 2024). The situation is even more worrying because in economic terms the Western Balkans is already seriously lagging behind the EU. Labor shortages are emphasized as a major problem by businesses in the region of Western Balkans and at the same time also threaten to harm the size of foreign capital investment: In the business survey of Balkan Barometer from 2021, 43% of respondents pointed out that the availability of labor is a key obstacle to doing business and that the situation was worsened compared to previous years. In particular, in Bosnia and Herzegovina, a country with the highest proportion of people living abroad in the region, labor shortages are a major obstacle to economic development, thus 61% of respondents said that the situation was worsened somewhat or significantly (Ármás, 2023). The population of Bosnia and Herzegovina recorded rapid fall in the last twenty years, thus around 500,000 people emigrated only in the last ten years and as a result some business sectors are considerably lacking a labor force (Marchais, 2023). In terms of the labor market, one of the main mechanisms of the impact of ageing is the participation rate, as this variable varies significantly over the life cycle. The labor market participation rate, i.e. the activity rate as a percentage of the population aged 15-24, tends to be lower in the younger cohorts, those between 15 and 24, who are still most affected by education-related decisions.

According to the research analysis of the Vienna Institute for International economic studies (2024), in the Western Balkans, in the period 2013-2022, in Bosnia and Herzegovina and N Macedonia this group experienced a significant decline in the participation rate, which stood at around 28.3%, respectively, for both countries, in 2022, significantly below the EU average of 42.8% in 2024, updated by Eurostat in May 2025. Other Western Balkan countries, notably Albania and Montenegro, have closely similar activity rates for 15-24 years to the EU average, i.e. 38.6% in Albania and 38.7% in Montenegro. In this period (2013-2022) this rate in Serbia and Kosovo fluctuated and its level in 2022 was 32.6% in Serbia and 19.6% in Kosovo. Despite significant increases over the last 10 years, labor market participation is particularly low among people aged 55-64 in Kosovo (33.8%) and Bosnia and Herzegovina (40.7%), followed by N Macedonia (55.1%), Montenegro (59%) and Serbia (58.5%) which remained slightly less below the EU average (which stood at 68.5% in 2024) as reported by the analysis of Vienna Institute for International economic studies (2024). In Albania, the activity rate of the 55-64 age groups in 2022 was above the EU average, i.e. 73.2%. These differences by age group give an indication of the structural effect on the participation rate as the age structure of the population changes. Thus, while the largest population cohorts (baby boomers)

approach retirement age, the overall participation rate declines due to the effect of no more than the structural aging.
Recent population projections by three international agencies served as a framework for the analysis of Nikitović et al. (2024). The projections of the United Nations—WPP2022 were taken as basis for calculating demographic indicators on future changes in the size and composition of the population and labour force of the countries of the Western Balkans. Nikitović et al. (2024) also built three scenarios of future activity patterns based on data from the Labour Force Survey in order to take into account actual labour force participation. Their results showed that the depopulation process will be a very certain feature in the Western Balkan region in the coming decades and that international migration could be of greater importance for overall population trends than fertility. The scenarios of Nikitović et al. (2024) showed that there would be no increase in the economic burden of an aging population in the next two decades, while it would be of minimal amount by 2060, even in the case of a modest increase in participation rates.

The implications of population aging on health expenditures is a phenomenon experienced worldwide: The empirical findings from previous studies show that population aging have a statistically significant and positively effects per capita health spending (Adanlawo and Nkomo, 2023). This means that when the proportion of the population in a country over the age of 65 increases, more health issues emerge, and the spending on healthcare also rises. Government expenditure on health as a percentage of GDP shows how much a government spends on health from its total resources, i.e. all current and capital expenditure on health at all levels of government, which includes primary, secondary and tertiary health care, as well as public health (Qehaja, et al. 2023). Recently, the Western Balkan countries have made significant progress in terms of access to health status and health care, although key indicators are still below the level compared to other European countries. There are differences across the Western Balkan countries, with per capita health expenditure ranging from a low of $270 in Albania to a high of $693 in Serbia and $683 in Montenegro. The average per capita health expenditure in the Western Balkan countries is $484, well below the OECD average of over $5,000 or the EU average of over $3,500 (Qehaja, et al. 2023). In addition, GDP spending on health care varies significantly across the Balkan countries, between 5.15% and 9.36% of their GDP on health. Usually, 5% of GDP is mentioned as the minimum level of public health expenditure required for universal health coverage, and in this case the levels of government health expenditure in all Western Balkan countries exceed the 5% threshold. The projected amount of healthcare spending in N Macedonia in 2040 is projected to be almost three times

higher than in 2015, and compared to the baseline period in 1995; the increase in total healthcare spending is estimated to increase by more than six times (Miladinov, 2017).

The importance of spatial planning and development in mitigating and adapting to climate change gained significance in academic discourse during the last decade. Climate change effects on economic issues, population groups, and demography have been the topic of an increasing body of scientific research literature recently (Dasgupta, et al. 2023). The interactions between economic activity, population growth, and environmental change, and have been argued ever since Malthus era, who disputed that limited natural resources are the main obstacle to the equivalence of population growth and economic growth. As Malthus (1798) claimed, economic output will stabilize at the maintenance level with zero population growth in the long run. It is generally accepted that demographic and environmental changes will significantly affect the future of our society. Thus, in the last two decades, there has been an increased awareness of the interrelationships between long-term environmental and demographic processes, i.e. that not only population dynamics affect the environment, but also that the environment can have important impacts on demographic processes by affecting fertility, mortality, and migration. In their study, Dugan et al. (2023) reviewed papers that analyze the interaction between economic growth, environmental factors, and a specific demographic variable, that is, specific life expectancy. Based on the review study, Dugan et al. (2023) concluded that combining environmental degradation, economic growth, and endogenous longevity into a consistent framework can highlight important mechanisms that explain real-world phenomena. Thus, the literature has provided explanations for the observed positive relationship between environmental quality and life expectancy by introducing the concept of an environmental poverty trap, which is distinguished by low life expectancy, low economic growth, and low environmental quality. The basic mechanism of the two-way causal relationship between environmental quality and life expectancy, which leads to the emergence of multiple equilibria, is explained by these authors as follows: when the existing environmental quality is high, life expectancy is also high, and therefore agents have a high incentive to save for future consumption, which leads to higher levels of physical capital, and to invest in environmental conservation, which leads to high levels of environmental quality. Increasing wages and good environmental quality lead to high savings and high environmental conservation in the next period, in the long run allowing the economy to converge to a steady state with high capital stock and high environmental quality. But the opposite is true when existing environmental quality and life expectancy are low. Thus, in this case, agents wish to consume relatively more in their first period of life instead of investing in the environment or savings. This leads to low environmental quality and income in the next period, sustaining a pattern of low environmental quality, low life expectancy, and low capital stock.

Climate change works for as a catalyst for migration, since lengthy exposure to extreme weather conditions may have long-lasting effects on people's economic welfare and health (Dritsaki and Dritsaki, 2024). Particularly those developing countries significantly affected, engage with the challenges of climate change with limited resources. As a result, in an attempt to escape worsening living conditions many people in these countries are forced to migrate. For those especially influenced by the unfavorable effects of global warming, migration becomes a means of adapting to climate change. Only in 2021, about 23.7 million people were displaced due to extreme weather conditions (Dritsaki and Dritsaki, 2024) and it was not just natural disasters like floods that force people to abandon their homes but also the situations when agricultural yields decrease due to steady environmental changes, like warming, some people choose to take off on migration. The factors influencing migration decisions are often complicated and personal, with social, economic, political, family, and demographic considerations taking core stage, further complicated by environmental and climatic impacts.

A comprehensive investigation of the possible health effects of climate change discloses a range of concerns (Banahene, 2024). These include fatalities and injuries following as a consequence of intense weather occurrences and heatwaves, changes in infectious diseases as a result of food and water contamination, expanded allergic symptoms due to increased allergen production, and the exacerbation of respiratory and cardiovascular diseases connected to deteriorating air pollution. In addition, indirect concerns include mental health consequences, population displacement, and the potential for civil conflict to develop. Climate change is a burning issue that has far-reaching effects on both public health and environmental sustainability. The connection between climate change and air pollution is well-known; the air pollutants such as carbon dioxide, methane, and nitrous oxide contribute to the greenhouse effect and global warming (Adamopoulos et al. 2025). The influences of climate change and air pollution on public health are many and various and intense. Thus, respiratory illnesses such as asthma, lung cancer, and chronic obstructive pulmonary disease are on the rise as a result to poor air quality posed by the greater number of pollutants in the atmosphere. Extreme heat events could also contribute to heat-related illnesses as well as death, especially among vulnerable populations such as the children, elderly, and low-income groups. Additionally, climate change and air pollution have notable implications for environmental sustainability as well. Rising temperatures and changing weather conditions can disturb ecosystems, contributing to the loss of biodiversity and food security threats. The research findings of Adamopoulos et al. (2025) focus attention on the important public health risks caused by related air pollution with climate change and African dust in Southern Europe. These results point out a significant correlation between the increased levels of air pollution,

worsened by climate change, and negative health outcomes in the region of Southern Europe. Countries faced with aging and shrinking populations would need to consider taking additional measures, such as the need to adapt workplaces, welfare, public health systems to accommodate the enlarged demand for accessible and affordable quality healthcare and long-term care (IOM, 2025). Climate change and environmental degradation are growingly relevant factors for internal mobility, particularly affecting the Western Balkans in the Southern Europe region (IOM, 2025). In some Western Balkan countries, migration can address population gaps in rural areas caused by internal mobility towards urban settlements.

B&H offers the clearest Western Balkans example of adaptive measures inside the SP system (UNICEF, 2023). The Federation's official Roadmap for a Shock-Responsive Social Protection System (2023–2027) sets out governance, data, financing and delivery reforms to enable rapid scale-ups. In late 2024, authorities piloted climate-shock response vouchers to flood-affected families (Kiseljak and Fojnica), demonstrating operational feasibility and coordination across social and civil protection actors. Parallel climate policy (the B&H NAP) also calls for integrating adaptation across social, economic and environmental policies—with floods highlighted as a primary risk—reinforcing the case to institutionalize ASP for repeated hydro-meteorological shocks that disproportionately harm older and poorer households.

Albania's adaptation policy has moved beyond strategy to implementation, with a growing portfolio of projects under its National Adaptation Plan process (DRR, local implementation, and vulnerability assessment). That agenda increasingly intersects with social protection: after the 2019 earthquake, UNICEF and partners documented sub-national, shock-responsive approaches that can be scaled nationally, while the World Bank has proposed an ASP pathway tailored to Albania's high multi-hazard exposure (floods, earthquakes) and large numbers of affected households each year. Taken together, these point to practical avenues to embed climate-risk data into registries, design contingency financing, and pre-define triggers for temporary assistance—critical for older, low-income households who face information and affordability barriers to adaptation.

North Macedonia is advancing its first National Adaptation Plan, with priority sectors (agriculture, water, transport, forestry, cultural heritage) and growing UN/IFIs support on inclusive social policy. Evidence compiled shows climate shocks are localized and inequality-amplifying, especially in rural municipalities with declining populations—precisely where older adults are over-represented (Prina et al, 2024; and WB 2024). This strengthens the case to link NAP actions to social protection system reforms (e.g., social registry coverage, delivery preparedness, and financing rules) so that temporary top-ups or emergency cash can be triggered when heat, floods or droughts hit vulnerable older households.

In situation of increasing life expectancy, low fertility rates, and rising financial compulsion on social security budgets, a lot of countries have already introduced or are considering reforms of their public pension systems. Generally, these reforms require parametric adjustments to the current pay-as-you-go (PAYG) scheme. The pay-as-you-go pension system is based on intergenerational transfers, where the companies are required to pay payroll taxes, which then are deployed to finance pensions, health and social protection of the retirees (Yang, 2024). As a result of that system, generations of people are able to retire with a guaranteed pension, receive universal health and social protection services. Thus, the difference between the number of individuals receiving pensions, health and social care services and those paying taxes lead the pension, health and social protection system's revenue and expense gaps to grow. To secure that pensions are paid on time, health services are delivered and social care is provided the governments must fund the pension, health and social care system from the budget, diversify the provision enabling both public and private service providers to reach everyone. This puts additional burden on the treasury (Yang, 2024). Lutz (2008) argues that in analogy to the discussion of climate policies governments will have to decide whether they want to focus solely on adaptation (taking demographic trends as given and trying to adapt to them as much as possible from their inevitable consequences) or whether they want to opt for some mitigation strategy in which they try to influence demographic trends. Lutz (2008) points out that typically in the West, governments have relied mostly on adaptation policies, while in the East on mitigation and especially direct permanent influence on the birth rate.

To address and/or to mitigate the pressing issue of an aging population, many countries in the world as well as in Europe have formulated policies aimed at mitigating the related socioeconomic consequences. Different policy reforms were undertaken to address the ageing populations. Among the most common policy reforms taken are in **pension and retirement policy**: (i) adjustments are extensions of the normal or statutory retirement age, as well as (ii) reduction in pension benefits; (iii) promotion of private pension savings (Xie, 2024; Devriendt and Heylen, 2018.
Some countries have tried to increase the retirement age or to favor for more elderly people to continue to work (Xie, 2024). This policy is particularly beneficial for several reasons. First, older workers tend to have both high incomes and high needs compared to younger groups, making their continued employment advantageous. Second, their vast experience also often makes it more practical for companies to retain them rather than retire them. This pattern is particularly common in European and North American countries, as these countries have a higher proportion of older people compared to developing countries. For example, in England there are 61% more people

over 70 working now compared to 2012 (Xie, 2024). In response to population demographic aging and its social, economic and political implications, a lot of EU governments aimed at increasing labor market participation of older people and retirement age (above 65 years), and concretely, some Member States of EU have already increased retirement age (for instance, Ireland to 68 years by 2028; and Germany to 67 years by 2031), (Márquez-López, 2023). To mitigate the negative social and economic consequences of an aging population, with the 2023 pension reform, France raised the retirement age from 62 to 64 years old (Yang, 2024). It is expected that increasing the retirement age to help reduce the deficit by aiding to balance the income and expenses of the French pension system. This raising of the retirement age can to some extent mitigate the economic impact of population aging, but it is not a complete solution. In the French case, continuous improving is still necessary, thus, the existing pension system could be further improved by reforms to the structure and level of pension payments, and with the setting up of a flexible retirement mechanism (Yang, 2024). This means an increase in the contribution rate and a reduction in the net pension replacement rate. According to the Law on labor relations in N Macedonia, women can retire at the age of 62 and voluntarily continue to work for another two years, while men gain the right to retire at the age of 64 and voluntarily continue to work for another three years. From 2026, the retirement age for men and women in N Macedonia should be increased to 67 years and at the same time the rate for pension insurance should be increased about 0.7 percentage points, i.e. to present 19,5 percent, the Fiscal Council recommends as a proposal of the 2025-2029 Fiscal Strategy of N Macedonia (Ministry of Finance, 2024). In Bosnia and Herzegovina, the right to a retirement pension can be reached at 65 years of age, if he or she has been paying insurance contributions for at minimum 15 years (Stopić, 2021). The retirement age of men in Albania remained not changed at 65 years in 2025 from 65 years in 2024 while the retirement age of women in Albania increased to 61.83 years in 2025 from 61.67 years in 2024 (Trading Economies, 2025). After several legislative changes to the contribution rate, decreasing from 31.7% to 29.9%122 (2002), then to 23.9% (2006) and 21.6% (2009), in Albania, another set of changes to the pension scheme, known as the “social pensions” reform, were adopted in 2015 (UNDP, 2024). Among many other changes, this time the retirement age was also affected, thus, there was adopted a gradual increase of the retirement age, aimed at reaching 67 years for both sexes in 2056.

Reduction of pension benefits can occur for several reasons, such as early retirement, income restrictions, or adjustments based on asset limits. For instance, taking a pension before the normal retirement age results is a reduction of pension benefits. Likewise, some pension plans have asset limits; if an individual's assets exceed certain limits, their pension may be reduced or they may not be eligible for a full pension. The straightest way to limit the impact of pension reforms on poverty in old age is to

decrease pension benefits only for those with higher income, i.e. to increase the progressivity of public pension benefits (Shang, 2014). To address fiscal challenges and manage increasing pension costs some of the Western Balkan countries have reduced pension benefits. It was done through measures such as temporary pension reductions and adjustments to pension indexation. In 2014, the Serbian Government implemented a "Law on Temporary Reduction of Pensions" to reduce the cost of pensions as a percentage of GDP (World Bank, 2022). As a result of this law, there were reductions of up to 25% for pensions above the average (about €200 during that time). The aim of the law was to reduce the cost of pensions to no more than 11% of GDP. Therefore, from 2018, pension payments were gradually increased, and special compensation for low pensions was introduced as well. Almost all Western Balkan countries faced similar challenges with pension systems since all are facing challenges related to aging populations and declining birth rates, which put pressure on their pension system. Such a context and challenges led to undertaking measures to reduce public spending and pension income as well as reforms aimed at managing the rising cost of pensions. These reforms included increasing the pension age and contribution rate, adjusting pension indexation to economic conditions and cost of living in the country, and a growing emphasis on social assistance programs and other social services to support vulnerable populations.

Private pension savings also known as personal pension savings provide a way for individuals to save for retirement, thus those individuals will have an income to supplement the amount he/she will receive from the state pension. With high scores in adequacy, sustainability, and integrity, as of 2024, the Netherlands ranks as the best pension system in the world (Euronews, 2024). The Dutch state pension (AOW) makes up the first pillar. All residents pay tax and social security contributions. Company/occupational pensions funded by employer and employee contributions make up the second pillar. Private pension schemes (annuities) funded by voluntary private/personal contributions form the third pillar. In December 2009, a new law on the pension system was adopted in Albania to integrate the legal framework of the private pension market (UNDP, 2024). This new law provided the basis for the creation of both voluntary occupational pension schemes, where on behalf of their employees, employers pay contributions, and voluntary personal pension schemes for individuals willing to contribute for additional supplemental old age pension, disability and death benefits. N Macedonia and Kosovo are the only ones in the Western Balkans that currently have a multi-pillar pension system, with N Macedonia being more fully developed, which includes a solidarity pay-as-you-go pillar, a second fully funded mandatory pillar based on individual accounts and voluntary private open and occupational pension funds (World Bank, 2023). Coverage of voluntary pension plans

stagnated in Serbia at around 10 percent of total employment and with funds equal to 0.85 percent of GDP. Both political entities in Bosnia and Herzegovina worked on a legal framework for voluntary pension savings, but their development is slow and subject to political and legal obstacles (World Bank, 2023).

Adjustments in **family and fertility policies** are second most common. One widespread approach is the pro-natalist policies which encourage higher birth rates to decrease the dependency ratio (Xie, 2024). However, its implementation leads to challenges, since it is not conveniently to order directives for procreation. Instead, the focus should be providing someone with an incentive for doing something, i.e. young couples to have children. Thus, there are various methods to achieve this goal, including financial bonuses, deciding on advertising campaigns, and expanding public infrastructure that eases the burden of parenting.
There is a considerable cross-national variation in the provisions and the modalities of family policies between the Northern European countries, the Southern European countries, the German-speaking countries, and the French-speaking (Neyer, 2003). Family policies in the *Scandinavian countries* are designed towards three goals: facilitating employment of mothers, alleviating mothers' work for their care, and changing gender roles in care and employment. Public childcare for children of all age groups is broadly available at low costs. Access to childcare is guaranteed as a social right of children to a full-time place in public childcare. Parental leave is regulated in a way that allows parents to care for their children without compromising their standard of living or their employment. In general, support for families is based on the provision of social services, not cash benefits. Family policies related to childbearing and child rearing are not very developed in the *Southern European countries* and childcare costs are comparatively high with except of Italy. Parental leave is unpaid. Child benefits are not universally available and extremely low by European standards. Additionally, these countries lack labor-market policies that support employment of young women and men. The *French-speaking countries* (France and Belgium) follow a policy that supports employment of mothers. Both countries have well-developed systems of public or financially supported childcare, but they are different in the way in which they support family care. France supports mothers in their care commitments by a scheme of many benefits, while Belgium places the emphasis on job rotation and flexible labor-market participation. In *the German-speaking countries* (Austria and Germany) family policies focus on mothers and on facilitating their withdrawing from the labor market. Public policies give priority to private care instead of public care. Policy regulations that are orientated towards combining employment and care are not developed and incoherent. Family benefits are generous, but benefits attached to care are low and insufficient to maintain a livelihood. However, family policies in both countries are formed by the concept that mothers who care for children are supported by a male breadwinner. Family policies in *the UK and Netherlands* pursue a similar principle giving

priority to labor-market participation. Both countries attempt to develop diversity and choice through supportive market dynamics.

Since fertility was rapidly declining during 1990s in several Central and East European (CEE) countries governments increasingly turned their notice to family and social policies to reduce the difficult situations with employment and childrearing and to deal with related issues such as parental leaves, child benefits and child care. The CEE governments adopted official program documents defining strategies how to deal with these matters. In some cases, institutions like ministries and committees were established to design and implement family policies. In others the recommended policies were not implemented and the objectives have remained not carried out as a result of political instability, political ideologies disagreements, lack of resources, or other competing government priorities. Frejka and Gietel-Basten (2016) examined fertility and family policies in 15 CEE countries to set up expected course of cohort fertility trends for the coming decade; and to provide a summary and analysis of family policies in CEE countries, and to estimate their effect on cohort fertility trends. In a number of CEE countries family policies have been of low priority for governments. Thus, Romania was particularly mentioned here, where the unstable political environment and the frequent change of administrations combined with the weak economic power of the state were among the reasons why the government neglected family policies. Additionally, except in Romania, frequently political instability often affected family policies in Hungary, Lithuania and Poland too, where it was recognized as an important aspect shaping family policies, but also in Ukraine, and Slovakia, and very likely to some countries elsewhere.

The *Conventional family policies model* with some specific configuration differing from one to another country persisted in countries like Croatia, Lithuania, Poland, Romania, and Serbia, and to some degree in Hungary (Frejka and Gietel-Basten, 2016). The conventional model in fact is a combination of maternal leave, child benefits, and childcare facilities which are available for some support for childrearing, but the range of aid is not sufficiently enough to relieve the employment-childrearing problem. The governments in Serbia and Croatia demonstrated great worry regarding low fertility and the wellbeing of families and children. Therefore, the official documents were prepared and committees formed, but policies were not implemented, apparently, sufficient resources were not available for family policies to be implemented, since these economies suffered from a lack of resources as a consequence of the wars which followed the disintegration of ex-Yugoslavia.

In countries with *prominent pro-natalist policies* (the main goal of this kind of family policies is to increase fertility mainly with financial incentives. These countries in some form introduced large birth allowances, likely in combination with raising other benefits as well as with well reimbursed parental leaves) – Belarus, the Russian Federation, and Ukraine – period TFRs have increased more than in most other countries. Even though in these countries some immediate effects of family policies on period fertility trends have been noted however when the respective cohort fertility data would become available, these increases may turn out to have been only a temporary effect. Bulgaria and Latvia also fit in the category of pro-natalist policies countries. But in Bulgaria and Latvia, there was even a slowdown of the period TFR trend around 2010.
Under the *Temporary male bread-winner model* the well-paid long parental leaves were prevalent within the state-socialist regimes. In some of these countries, the parental leaves were kept and prolonged while childcare for small children under age three has abandoned and is non-existent. Mothers and future mothers were often discriminated against and their working conditions made it difficult to balance employment and household responsibilities with scanty possibilities for part-time work. Somehow this model becomes a reality nowadays. In the Czech Republic and Slovakia, the countries with the typical male breadwinner models any remarkable effect on hindering a cohort fertility decline was not evident by today. Yet, perhaps the family policies have had some other beneficial effects, such as a fairer income distribution or alleviation of poverty. In all remaining CEE countries, such as Romania, Poland, Serbia and Croatia the period TFRs have experienced only modest growth. Lithuania was the exception with a period TFR at 1.6 in 2012 which was increasing since the mid-2000s and with relatively stable and higher cohort fertility rate.

The findings of Frejka and Gietel-Basten (2016) indicated that Estonia and Slovenia are only two countries in which family policies may have positive impact on cohort fertility trends. These two countries carried out the *Comprehensive family policy model.* In this family policy model, governments create reasonably advantageous conditions for women and men to improve the difficulties linked with taking care of children and households, as well as being employed. What is important is that not only are financial and material benefits available for mothers and fathers, but also institutional childcare and the working conditions for mothers are adequate.

Even though in varying degrees' other Eastern European socialist countries decided for pronatalist policies, Yugoslavia kept a very liberal population policy supported of a liberal principle of family planning, withholding from openly pronatalist measures and with no interest to interfere with family decision-making (Čipin et al. 2020). In the 1990s, especially in Croatia and Serbia, there was an attempt to replace socialist family policies but such attempts were mostly visible in the official government proposals

and public discourse, the lack of resources and economic crises disabled such initiatives. Slovenia was only country from former Yugoslavia that has a relatively well-developed, comprehensive family policy, but research has not disclosed any significant impact of generous family policy measures on individual fertility behavior (Čipin et al. 2020). In fact, encouraging higher fertility in former Yugoslav countries has not been particularly effective across the last few decades**.**

Family policies are very limited in the region of Western Balkans, parental leave is much less generous compared to Northern European countries and childcare services are considerably lacking (Marchais, 2023). The discernments in the population policies revealed that mostly in the Balkan countries the "major" concern about population aging appeared prior than the concern for "too low" fertility. Thus, the Western Balkan countries have fertility-related policies aimed at “raising” fertility, while Albania has a policy to “maintain” fertility levels. Only the government of Bosnia and Herzegovina promoted a “no intervention” approach (Janeska et al. 2018). However, the present demographic situation in the Western Balkans points to the lateness of fertility policies, furthermore, the measures and activities have had little effect on “raising” fertility, in other words, experiences show that policies created to increase fertility have had only limited success (Janeska et al. 2018). The increased involvement of the EU in guiding social policy reforms through the accession process and the inclusion of countries in economic reform programs led to greater pressure for the Europeanisation of social policy in the Western Balkans. There have been gradual shifts towards EU-compliant changes in labor policies and improved parental leave policies in response to population decline and ageing (Bartlett and Uvalić, 2022). However, at the same time, these reforms have not been easy to implement due to the reluctance of local politicians to accept parental leave and low fiscal capacities that have limited the provision of early childhood education and care, except in the private sector. Few changes have occurred in the provision of maternity leave, apart from cost-containment and eligibility reforms. Thus, universal child benefits have been introduced in Montenegro and in Kosovo since 2023, while broad means-tested child benefits are available in N Macedonia and Serbia (Bartlett and Uvalić, 2022). In addition, there has been an emphasis on introducing minimum wages to reduce in-work poverty (Bartlett and Uvalić, 2022).

The following adjustments are observed in **health care policies**: (i) focus is given on prevention and care; (ii) investment in long term care infrastructure and (iii) integration of primary and tertiary care and social services. Prevention from chronic diseases and lifestyle instigated health conditions have been taken in UK and the US most prominently for instance, the UK's National Health Service (NHS) has implemented

various community health programs targeting lifestyle-related diseases, while the US has implemented most comprehensive vaccination initiative to prevent chronic diseases (Hudon et al. 2012). Both are proving to be effective in reducing healthcare costs and improving outcomes. Countries like Japan and Germany have implemented public long-term care insurance systems that provide coverage for elderly care services. These systems are designed to alleviate the financial burden on families and ensure access to necessary care (Chen et al. 2020). The long-term care policy interventions are usually implemented cross cutting with the integration of health care and social services. Namely, one model is the macro strategy of the Danish welfare system which offers universal, tax-financed health and welfare services; and a high degree of decentralization leading to the development of integrated, institutional and community-based services for older people (Stuart and Weinrich, 2001). The mezzo strategy would be to have health and social care organizations designed to provide specialized services for the unique and common problems that occur across the life span. On a micro, individual level, strategies that assist those who are planning the care and services for older people to identify appropriate services and facilitate access to them (Reed et al. 2005).

In **labor market policies** the aging of populations instigated the following adjustments: (i) encouraging older population to work longer; (ii) life-long learning; and (iii) immigration adjustments. Encouraging older people to work after retirement involves addressing both individual motivations and changes in the entire workplace and policy system (Aitken and Singh, 2023). This can be achieved through flexible working arrangements, providing opportunities to support career development and progression, and ensuring a positive and inclusive work environment for older workers. In addition, policies should encourage longer and more flexible transitions into retirement and address potential financial barriers (e.g. underfunded pensions) to remaining in the workforce (Aitken and Singh, 2023). In a rapidly changing world, where globalization, technology, climate change, growing polarization of societies, and demographic and social dynamics are reshaping every aspect of life, education is undergoing a transformational journey (UNESCO, 2025). Education is no longer confined to skills and knowledge acquired at school, college or university, but there is a need to learn throughout life. Lifelong learning is a successful and transformational means of coping with present global challenges. Lifelong learning helps countries throughout the world respond to aging societies, with the global population of people aged 65 or older expected to be more numerous than youth by 2050 (UNESCO, 2025). Also, lifelong learning and immigration adjustments are related. Lifelong learning can help immigrants adapt to their new environment, gain skills, and improve their overall welfare, while immigration adjustments can stimulate individuals to proceed with lifelong learning to meet new opportunities and challenges (Fejes and Dahlstedt, 2023). By implementing some measures such as flexible work arrangements, additional

pension benefits or tax breaks, training programs for older workers, introducing phased retirement schemes, and addressing health and skill gaps, the countries of Western Balkan can create a more sustainable and inclusive labor market that both older workers and the broader economy will benefit (Eurofound, 2025).

In the **local territorial planning and development policies** the most common interventions induced by aging of population are: (i) age-friendly urban planning (accessible transportation, housing, and public spaces); (ii) combating isolation (programs to engage older adults in volunteering, community activities); and (iii) using technology (helping older adults stay connected and access services online). The ongoing policies related to the urban planning and public services are predominantly directed towards greening of the local services and local development planning. The burden of now mandatory green urban planning falls in smaller cities and rural areas where the cost of the adaptation to climate change is higher than the cost in the urban areas where the economy of scale affects the public service provision. Greening the transportation, housing and public spaces falls as an additional cost to the aging population which is also higher emitter of the GHG emissions due to its current living habits. The policies for successful implementation of the greening processes especially in smaller towns and rural areas with probabilities of demographic decline due to expensive and inaccessible public services are based on provisions of EU, state and rarely local investments and subsidies. The regional development is part of the Cohesion policy of the EU. The development of the rural areas lies also in the CAP of the EU and on national levels specifically by subsidies defined in Rural Development Programs and respective measures funded by European Agricultural Fund for Rural Development. On the other side, there is an Urban Agenda for the EU (EUI) which aligns the EU strategic priorities and implementation in Urban Development. It aims to realize the full potential and contribution of urban areas towards achievement of the EU objectives and national priorities. It does not only contribute to overcoming bottlenecks in the current EU regulations, but it also contributes with defining sources of funding for its implementation and serves as a knowledge base. The current policies of the Western Balkans countries in these regards are mostly reflected in utilization of IPA and loans from International Financial institutions such as EBRD and the specific programs for greening the cities and territories.

The programs for combating isolation are different in various countries. In France there is the national program MONALISA which instigates the commitment of professionals, family members and volunteers in promoting joint living and reciprocity. The program helps mobilize volunteers and puts in place 'citizen teams' (équipes citoyennes) to identify isolated older people and to provide appropriate support. In UK LinkAge is national initiative that connects individuals, groups and organizations through a

platform that facilitates the transfer of knowledge, experience, and skills from older people to the community. In Switzerland KISS programme is established as national program to promote and support the creation of cooperatives to run a non-monetary time-banking system. The scope of the program is to create additional incentives for volunteering. The program established a number of cooperatives (public meeting places) throughout the country where people in need and people offering their services could meet and interact (communicate, do gardening and shopping together etc.). Befriending Network Ireland is national program designed to support lonely and isolated older people through weekly volunteer visits and calls.

The regional development is part of the Cohesion policy of the EU. While EU puts emphasis on the regions with declining development, there is yet not such strong supported policies in the countries subject of the study. The impact of aging and migration puts forward the major decline in regional development in areas out of the capitals (Imami et al. 2018; Avdić et al. 2022). The interventions aimed at boosting growth and employment in less developed regions, need further reconsiderations. This is affecting the implementation of the policies for equal opportunities and local service provision. In such position there is lack of possibilities for reaching territorial cohesion within the three countries, especially in rural areas which are mostly affected by the population outflow. The similar cases are already seen in Bulgaria, but the comparison of interventions is not applicable as its EU member country and the cohesion funds are made available to provide more opportunities for reviving the regions that face population decline.

In spite of the foreign investments the regional disparities in Albania, Bosnia and Herzegovina and Macedonia are reflected through the uneven regional income growth. While the capitals dominate with the highest income levels and employment rates, the rest of the regions and rural areas lag behind due to limited infrastructure, lower investment, and outmigration. There are few regions in each country such as coastal region in Albania, Southwest region in Macedonia and Herzegovina Neretva region in Bosnia and Herzegovina that reach spikes during tourist seasons but yet remain with unstable income growth throughout the year.

The country studies will further look into the following areas (where data available) which affect the territorial development caused by outmigration: Urbanization and Regional Disparities; Rural Depopulation vs. Urban Overcrowding; Infrastructure Challenges; Depopulation and Land Use; Rural Abandonment and Reforestation; Agricultural Decline and Soil Degradation; Urbanization and Sustainability Challenges; Pressure on Water and Waste Management.

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