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VLADIMIR PETKOVSKI *
ELIZABETA DJAMBASKA **
ALEKSANDRA LOZANOSKA ***

SOCIO-ECONOMIC DEVELOPMENT AND QUALITY OF LIFE IN TERMS OF DEMOGRAPHIC CHANGES IN NORTH MACEDONIA

Abstract

*The primary objective of this paper is to identify the demographic changes occurring in the Republic of North Macedonia and their impact on the economy, with a specific focus on poverty and inequality, social security schemes, implications on quality of life and regional disparity in spite of sustainable development challenges. The research utilizes data from the 2021 census and other relevant sources to examine the demographic trends in North Macedonia. The research findings**** reveal that existing demographic changes in North Macedonia as reduction of the natural population increase, due to the decreased natality and increased mortality, intensive emigration of the population from the country, especially the young and educated people, led to population ageing and gradual decrease in the number of the population. Demographic changes have a direct impact on economic growth and development, and the economy is confronted with numerous challenges in the socioeconomic sphere. By studying these interrelated factors, the paper aims to provide insight into the challenges that the Macedonian economy is facing and suggest policy recommendations to promote sustainable development and effectively address demographic challenges.*

Key words: demographic changes, socio-economic development, poverty, inequality, pension and health care, regional disparity, sustainable development goals

JEL classification: O150, R1, J26, I310, Q010

* PhD, Associate professor, Institute of Economics – Skopje, Ss. Cyril and Methodius University, North Macedonia, vladimir@ek-inst.ukim.edu.mk P

** PhD, Professor, Institute of Economics – Skopje, Ss. Cyril and Methodius University, North Macedonia, beti@ek-inst.ukim.edu.mk

*** PhD, Professor, Institute of Economics – Skopje, Ss. Cyril and Methodius University, North Macedonia, sandra@ek-inst.ukim.edu.mk

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INTRODUCTION

Human resources are a basic determinant, without which the functioning of any economy cannot be imagined. The economy cannot generate GDP if there are no adequate human resources, despite the availability of natural resources and capital. Thus, we can say that human resources are a basic factor, which, along with capital and natural resources, defines the economic growth and development of the economy. They can be referred to as their accelerator.

The data from the census in 2021 shows that the Macedonia has been experiencing significant population changes in recent years. The reduction of the natural population increases, expressed by the reduced birth rate, as well as the benefits of the increased life expectancy, the intensive emigration of the population from the country, especially the young and educated people, led to a gradual decrease in the number of the population. This has resulted in the population aging in the past few decades.

This situation presents numerous challenges and produces problems that the state will face even more prominently in the medium and long term. As working populations decrease, there is a decrease in the amount and quality of available labour force. In that context, the unfavorable influence of these changes on the functioning of the labour market is evident, which directly reflects on the economic growth and development of the Republic of North Macedonia. In addition, demographic changes also cause changes in the structure of aggregate demand, which directly affect the aggregate supply in the market for goods and services and at the same time affect real GDP. The aging population's needs are changing, resulting in an increase in demand for certain categories of goods and services and a decrease in demand for others, while the need for industries that should provide the necessary goods and services increases.

The impact of demographic changes on sustainable development and regional development is significant due to the reduction of the resident population and depopulation, as well as the accelerated population aging. In addition, they reflect on the quality of life. The changes are present in the social sphere and have implications on the standard of living, inequality, and poverty of the population, as well as on the pension and health system in the country.

1. DEMOGRAPHIC IMPLICATIONS ON QUALITY OF LIFE

The demographic phenomenon known as aging or population decline, which involves a decrease in birth rates and an increase in life expectancy, has significant implications for social and economic dynamics. These demographic changes have had a significant impact on inequality and poverty. The aging of the population is usually accompanied by a growing labour shortage, due to the reduced influx of new generations of the working population. This can lead to increased competition for skilled labour, increased wages for certain occupations, and worsening income inequality. At the same time, older workers may face existential challenges, i.e. remain unemployed, have problems re-entering the labour market, especially in sectors that prioritize young people with technological knowledge and skills.

Conversely, population decline can also lead to a decrease in demand for goods and services, resulting in job losses and wage stagnation in certain industries. This can disproportionately affect low-skilled workers and exacerbate income disparities. In addition, older workers who are unable to retire may be forced to accept lower-paying or insecure jobs, further contributing to income inequality.

Health care and social security systems are facing significant challenges in meeting the increasing needs of an older population with limited resources due to rapid population aging. The old-age dependency ratio¹ is one of the most relevant indicators of the implications of population aging on social transfers. The indicator gives a rough estimate of the potential pressure, which an aging population can put on public finances and on the sustainability of pension funds in the context of demographic changes. In the past period, a small but continuous increase in the old-age dependency rate has been observed as an approximate representation of the potential relationship between the number of pensioners and the employed population, i.e. between the outline of the benefits and those who create them. According to the available data of the State Statistics Office of the Republic of North Macedonia, the old-age dependency ratio increased from 15.5% in 2002 to 26.1% in 2021.² The population projections indicate that the old-age dependency ratio will increase further, which will result in a greater burden on the health and pension systems.

1 The indicator represents a ratio between the total number of persons of age (65 and over) and the number of persons of working age (15-64).

2 State Statistics Office of the Republic of North Macedonia, data according to Population Census 2021 <https://www.stat.gov.mk/OblastOpsto.aspx?id=31> (accessed on 31.1.2024)

The care of the population in North Macedonia is not provided by a single system, but it is partially provided through the social protection, pension and insurance system run by the Ministry of Labour and Social Policy and partially through the health system which is under the responsibility of the Ministry of Health. With an aging population, caring for the elderly will be another major challenge.

Pensions represent the most effective social transfer in North Macedonia, as they also reduce the risk of poverty by 15.1 pp. (other social transfers further reduce it by only 4.4 p.p.)³. While these indicators confirm the adequacy of pension income, measured by its ability to prevent and mitigate the risk of poverty among retirees, not all those of retirement age have the same standard of living: about 13.4% of those aged 65 and more years are at risk of poverty in 2021. These rates decreased steadily from 2010 to 2021, with a total decline of 4.1 pp.⁴

This can result in inadequate retirement benefits and pension reform measures that disproportionately affect low-income individuals. In addition, older adults who rely on Social Security benefits as their primary source of income may face financial insecurity if benefits fail to keep pace with the rising cost of living.

The significantly high rate of material and social deprivation among the elderly suggests that their incomes do not provide dignified living conditions. As pointed out by Eurofound (2017), the pension and tax systems are important for reducing income inequality among the elderly in the European Union. This also applies to North Macedonia, whose elderly population seems to be more equal than the able-bodied population. The income distribution illustrated by the income quintile ratio (S80/S20) reveals that the income of the richest 20% is 5.9 times higher than that of the poorest 20%⁵. Among those under the age of 65, the S80/S20 indicator shows that the income of the richest 20% is 6.42 times that of the poorest 20%.

3 Eurostat, 2020 (ilc_li02; ilc_li09; ilc_li10; ilc_li02)

4 https://www.stat.gov.mk/pdf/2022/4.1.22.40_mk.pdf

5 https://www.stat.gov.mk/pdf/2022/4.1.22.40_mk.pdf

The aging of the population represents the biggest challenge for the pension system and also represents a risk for the stability of public finances and the future economic growth of the economy. The situation is further aggravated by the health and economic crisis, which suppressed economic growth, exposed the economy to increased financial costs that intervened in the economy to alleviate the negative aspects of the crisis in terms of economic and social protection, and increased the public debt of the state. The recovery from the consequences of the crisis is slow and presupposes the application of strategies, first of all, with which economic growth will be encouraged and with which the pension system will be adjusted so that it can cope with the changed economic and demographic circumstances.

Aging or shrinking populations pose challenges to health care and social security systems, which may struggle to meet the needs of a growing older population with fewer resources. Limited access to affordable health care and social services can exacerbate health disparities and increase the risk of poverty among older adults, especially those with chronic conditions or disabilities, especially those who cannot afford to use private health care services and facilities. Namely, the increase in the elderly population is not followed by adequate provision of services (social care and health care, in public or private facilities and institutions). This implies higher financial allocations by the state and their targeted investment.

2. DEMOGRAPHIC CHANGES AND REGIONAL DEVELOPMENT

The current demographic situation has unfavorable implications for regional development in Macedonia. The disproportionate socio-economic development at the regional level, which the country has been facing since the beginning of independence as an independent and sovereign state, and which continues from the past, was and remains one of the challenges of the policy makers. In the last two decades, the conditions for development of the regions in the country have not been created, but on the contrary, inequality between the regions has increased even more. The growth and development of one central region (Skopje) which gravitates around the capital, at the expense of other regions, is further emphasized by demographic changes. The positioning of all important institutions for the functioning of the Macedonian economy in the capital Skopje, as well as the employment opportunities in the Skopje

region, led to a continuous immigration of young people from the interior of the country to the capital, which, regardless of the reduced intensity, caused a huge concentration of the total resident population. At the same time, the accelerated aging of the population and labour force in other regions further reflected on the deepening of regional differences in the country's development.

The data from the Population Census in 2021 showed that all regions except the Skopje region in the period after 2022 were affected by a depopulation process, with a decrease in the resident population in 66 of the 80 municipalities according to the existing territorial organization of North Macedonia. This process was accompanied by the aging of the population and a significant reduction of the available human resources necessary for the promotion of economic growth and development of regions and municipalities.

According to the situation in 2021, 17 municipalities in Macedonia had less than 5000 inhabitants, of which 15 are rural municipalities (Table 1). With a relatively small population (from 5,001 to 10,000 inhabitants), 16 more municipalities stand out, 10 of which are rural.

Table 1 Number of municipalities according to the number of residents, North Macedonia, 2021

Total	Number of municipalities according to the number of residents				
	Total	to 5000	5001-10000	10001 - 20000	more than 20000
Republic of North Macedonia - total	80	17	16	19	28
- of them rural	37	15	10	9	3

Source: State Statistics Office of the Republic of North Macedonia, data according to Population Census 2021 <https://www.stat.gov.mk/OblastOpsto.aspx?id=31> (accessed on 31.1.2024)

The most municipalities with up to 5000 residents are found in both the Vardar region (4 municipalities, 3 of which are rural), and the Southwest region (4 municipalities, all of which are rural). In the Eastern region, there are three municipalities with up to 5000 residents, two of which are rural municipalities. (Table 2)

Table 2 Number of municipalities according to the number of residents in the regions of North Macedonia, 2021

	Number of municipalities according to the number of residents				
Total	Total	to 5000	5001-10000	10001 - 20000	more than 20000
Vardar Region	9	4	1	2	2
- of them rural	4	3	1	0	0
Eastern Region	11	3	2	4	2
- of them rural	3	2	1	0	0
Southwest region	9	4	1	1	3
- of them rural	4	4	0	0	0
Southeast region	10	2	2	3	3
- of them rural	5	2	1	2	0
Pelagonian region	9	1	4	2	2
- of them rural	4	1	2	1	0
Polog region	9	0	2	4	3
- of them rural	7	0	2	4	1
Northeastern region	6	2	1	1	2
- of them rural	3	2	0	0	1
Skopski region	17	1	3	2	11
- of them rural	7	1	3	2	1

Source: State Statistics Office of the Republic of North Macedonia, data according to Population Census 2021 <https://www.stat.gov.mk/OblastOpsto.aspx?id=31> (accessed on 31.1.2024)

Apart from the small population, the municipalities with up to 5000 inhabitants also stand out according to the very unfavorable demographic structure of the population. Namely, most of them are characterized by the relatively small representation of children and young people of working age, then by a narrow reproductive base of the population, as well as a large representation of the elderly population. Namely, in 8 out of 17 municipalities the population is in the stage of deepest demographic age (rank 7), in 7 municipalities in deep demographic age (rank 6), and only in 2 municipalities in demographic age (rank 5).⁶

In such circumstances, the question of the sustainability of these municipalities arises. A more detailed demographic analysis of the demographic and socio-economic characteristics of the resident population in these municipalities will show that they do not have available human resources to encourage their development.

⁶ State Statistics Office of the Republic of North Macedonia, data according to Population Census 2021 <https://www.stat.gov.mk/OblastOpsto.aspx?id=31> (accessed on 31.1.2024)

Population aging has implications in other areas of life as well. It coincides with the period of intergenerational wealth transfer, as typically older individuals pass on assets to their heirs. However, differences in inheritance patterns can exacerbate wealth inequality, especially if wealth is concentrated among a privileged minority. In addition, population decline may lead to a decline in demand for housing, especially in rural areas or regions with negative net migration. This can result in lower property values and reduced home ownership rates, disproportionately affecting low-income individuals and exacerbating wealth inequality. Furthermore, older homeowners may have limited access to home equity, limiting their ability to fund retirement or invest in their well-being.

3. SUSTAINABLE DEVELOPMENT IN THE CONTEXT OF POPULATION AGING

Demographic changes in the Republic of North Macedonia led to large-scale depopulation and accelerated aging of the population and workforce. It will have very big consequences and implications on the socio-economic development of the country in the medium and longer term, determined by the long-term demographic trends. In these circumstances, it is necessary to adapt public policies to demographic aging, among other things, through the implementation of measures and activities to achieve the 17 goals of sustainable development of the UN.⁷ The revised 2022 UN policies to mainstream population aging into all policies assume strategic action by states. Such an approach in the area of the elderly population implies a favorable impact on economic growth, social well-being, quality of life, improvement of health and education, with the control of environmental differences (climate changes, preservation of the biodiversity of the seas and oceans, etc.)⁸

7 UNECE, Mainstreaming Ageing – Revisited, Policy Brief, UNECE Policy Brief on Ageing No. 27, 2022 (<https://sdgs.un.org/goals>).

8 Mirjana Bobić, About aging. Is demographics destiny? (First edition), University of Belgrade - Philosophical Faculty, Institute for Sociological Research, Belgrade, 2023, p. 66

Table 3 Adaptation of public policies to the aging population in function of sustainable development

1. An aging population can stimulate economic growth by maintaining fiscal sustainability through appropriate policies.	6. To ensure intergenerational equity and fiscal sustainability (goals 8 and 10), it is important to ensure a balanced approach to financing consumption in old age.
2. The reduction of poverty and inequality and the promotion of social inclusion (goals 1, 8 and 10) require universal social protection with appropriate rights for beneficiaries.	7. Adopting social security reforms that take into account the widening differences in life expectancy by socioeconomic status can reduce inequality (goal 10).
3. To maintain maximum functional capacity and well-being (goal 3), it is important to promote health throughout life and provide preventive health care.	8. The creation of cities and communities that are adapted to different generations leads to the creation of safe and inclusive neighborhoods (goal 11).
4. Investing in education, health, and welfare for all, including lifelong learning, can increase productivity and sustain economic growth, even when working population is decreasing (goals 3 and 4).	9. Eliminating age discrimination, including age barriers in employment, can reduce inequality, increase productivity and boost economic growth (goals 8, 10 and 16).
5. Promotion of gender equality in employment and adaptation of family-oriented policies can increase population participation in the labour force and accelerate economic growth (goals 5 and 8).	10. The development of data collection and analysis of population-economy linkages is crucial for policymaking (goal 17).

Source: Bobić Mirjana, About aging. Is demographics destiny? (First edition), University of Belgrade – Philosophical Faculty, Institute for Sociological Research, Belgrade, 2023, p.66-67

The sustainable development of North Macedonia, in the context of the manifested demographic changes in the last two decades and the existing conditions, indisputably implies the need to adopt public policies to the expected changes in population development and the intensity of demographic aging in the medium and long term.

CONCLUSION

Challenges and opportunities arising from demographic changes in Republic of North Macedonia requires proactive measures, joint efforts and adaptive policies to ensure inclusive and sustainable growth. The economy will be confronted with the issue of a significant loss, primarily due to a lower potential GDP and also the increased needs of the elderly population. The forthcoming depends on a number of strategic questions, including how to stimulate innovation and productivity, how to bring people into employment, how to modernize healthcare systems, social protection and social services and how to address territorial disparities. There are multiple approaches and possibilities to overcome this situation and the consequences from the demographic changes in the economy.

First of all, it is important to understand that strategic approach is necessary. Economic growth should be based on increased value of human capital, high level of application of technology, know-how and artificial intelligence, as well as increased productivity. Economies can achieve high rates of economic growth, although they have low rates of population growth and limited available basic resources, they can ensure growth with high rates of investment in physical capital and spend a greater part of time and resources for human capital accumulation.

Investments in human capital by individuals, enterprises and the state, encouraging research and development of new technologies, as well as digitization of work processes and the use of artificial intelligence, will enable an increase in productivity. At the same time, it is necessary to increase the capacities and capabilities of enterprises for the application of new technologies and encourage innovative activities, private investments in human capital, active involvement of management, as well as conducting technical training. The role of the state as an active participant in these processes is essential. Above all, increasing investments by the state in education, through training and education of the teaching staff, enabling adaptation of curricula in all levels of education, greater investments in research and science, help and support of the private industry and creation of programs and activities with which the private and academic sector will be more connected are the ways in which the state should actively support the economy.

Improving the quality of education should enable the acquisition not only of new skills and knowledge, but also enable people to think critically and develop abilities for easier adoption and application of new technologies.

In addition, it is essential to apply measures that reduce emigration abroad, especially among the young population and through systematic solutions create conditions for them to stay in the country.

One of the most important challenges is the sustainability of the pension system. The future adequacy of the pension system in North Macedonia will depend on demographic and economic trends, and emigration and the employment rate will play a prominent role.

The present situation with reduced workforce will increase pressure on public budgets. North Macedonia will face a major challenge in funding age-related spending, in a way that is also fair across generations. This is because the ratio between people paying taxes and social security contributions and those receiving pensions and other benefits is decreasing rapidly. Most related spending will be on health and long-term care, expenditure for pension is also projected to rise relative to GDP. In designing solutions to these issues, policy makers have to deal with a high degree of uncertainty. The approach in future public expenditure trends will depend not only on demographic trends but also on other factors such as technological progress in diagnostics, treatments, pharmaceuticals and medical devices, or increased demand for publicly provided health and long-term care. All these entail additional costs over the medium and long-term. Without policy change, increasing pressure will also be put on private expenditure, as people in long-term care may have to cover a higher share of overall costs. One of the measures could be the progressive taxation.

Addressing the impact of an aging population on inequality and poverty requires also comprehensive policy responses that prioritize equality and social inclusion. Investing in education and skills training programs can empower individuals to adapt to changing labour market dynamics and access higher paying job opportunities. Additionally, implementing progressive taxation policies and strengthening social safety nets can reduce income and wealth inequality, ensuring that all members of society have access to basic resources and services.

Furthermore, promoting age-friendly environments and community-based models of care can support healthy aging and enable older adults to remain active and engaged members of society. This includes expanding access to affordable health care, housing and transportation options, as well as fostering intergenerational solidarity and mutual support networks.

Economic development in North Macedonia depends on the capacity of the institutions, and not only on the availability of resources. The implementation of any measures and activities that encourage economic growth, development, and enable sustainable development goals requires strengthening institutional capacities.

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