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CHALLENGES OF THE DEMOGRAPHIC AGEING IN THE REPUBLIC OF NORTH MACEDONIA – CURRENT SITUATION AND PROSPECTS

Abstract: The aim of this paper is to identify the changes in the period 2002-2021 and current situation related to population ageing and basic functional contingents of the resident population in North Macedonia. Based on the analysis the main challenges in terms of demographic and socio-economic development on mid and long term are determined and areas in which appropriate policies should be developed. The analyses show that resident population has declined for about 12% and the demographic ageing was accelerated. It results with decrease of the number of children for 27%, young population (32%), working-age population for (12.4%) and female fertile population (21.4%), while the population aged 65+ increased for 47.5%. In circumstances of extremely unfavorable demographic situation, the country is facing three major challenges referring to the necessity to mitigate the decrease of the resident population and of the young working-age population, as well as the rapid growth and aging of the elderly population. Each of them is equally complex and requires great attention and comprehensive activities of the policy makers in the country. Indisputable interrelation of the policies in all these areas requires creation and of a comprehensive strategy for family that should include all relevant aspects related to promoting its position and sustainability.

Keywords: demographic aging, fertile population, working-age population, old population, population policy

JEL Classification: J11, J20, J13, J14, J18

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Introduction

The demographic, economic and social implications of a population aging are becoming increasingly obvious in many countries worldwide. The policymakers are confronted with many challenges including a decline in young population and the working-age population, increased health care costs, unsustainable pension systems, and changing demand drivers within the economy.

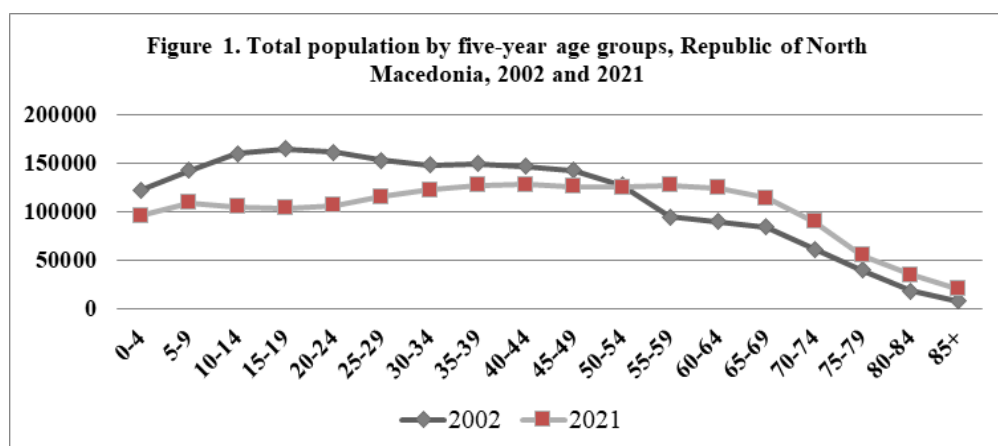
Demographic implications are manifested in narrowed reproductive base of the population and fertility decrease. The decline in the working-age population results in a supply shortage of qualified workers, making it more difficult for businesses to fill in-demand occupations. It can result in opposing consequences, including decline of productivity, higher labour costs, delayed business expansion, and reduced international competitiveness.

A country with a large senior population depends on a smaller group of people to pay for higher health costs, pension benefits, and other publicly funded programs. Considering that the demand for healthcare rises with age, countries with rapidly aging populations must allocate more money and resources to their health care systems. An economy with a significant share of seniors and retirees has different demand drivers than an economy with a higher birth rate and a larger young working-age population. Rapidly aging populations tend to have greater demands for health care services and retirement homes, challenging the markets to transit towards goods and services linked to older people.

This paper examines the challenges of the demographic aging in the Republic of North Macedonia, considering its specific demographic and socio-economic situation. Analysis is made on the changes in the total resident population and main functional contingents (children, working-age population, female fertile population, women on optimal reproductive age and the old age contingent) in the country in last two decades. The findings from this analysis are used to identify the challenges and possible outcomes and policies which can be undertaken in order to mitigate the unfavorable population aging situation. In the study the Population Census data 2002 and 2021, vital statistics and Labor Force Survey data from State Statistical Office of the Republic of North Macedonia are used, but also and other available data from relevant institutions are considered.

1. CHANGES IN THE TOTAL RESIDENT POPULATION

According to 2021 Census data, total resident population in North Macedonia amounts 1836713 inhabitants that is 9.2% less than in 2002 (Figure 1). Calculations according the vital-statistical method show that in this period the country has lost more than 240 thousand inhabitants due to emigration abroad, which includes the entire natural population increase (around 54 thousand persons) and more than 185 thousand persons of the resident population in 2002. It means that the total population in 2021 is lower, not for 9.2%, but for about 12%.



Source: State Statistical Office of the Republic of North Macedonia, Population Census data, 2002 and 2021

Population changes are accompanied by accelerated population aging. This process in North Macedonia began in the mid-1990s when the population reached the **threshold of demographic age** (rank 4 out of 7).⁴ According the 2002 Census data the total resident population had entered the stage of **demographic age** (rank 5), while in 2021 the resident population is in the stage of **deep demographic age** (rank 6) (Table 1).

⁴ According the extreme values of the five indicators there are seven stages of demographic age: 1 – early demographic youth, 2 – demographic youth, 3 – demographic maturity, 4 – threshold of demographic age, 5 – demographic age, 6 – deep demographic age and 7 – deepest demographic age. Source: Population and households of SR Yugoslavia according the Census 1991, SZS and Centre for demographic researches of the Institute for social sciences, Population 47, p. 131

Table 1. Indicators of demographic aging in North Macedonia

	Average age	Young population (up to 20 years)	Younger than 40 years	60 years and more	Aging index	Rank
1994	32.9	33.2	64.5	13.0	0.392	4
2002	35.1	29.3	59.6	15.0	0.513	5
2021	40.8	22.6	48.4	24.0	1.060	6

Source: State Statistical Office of North Macedonia, Population Censuses 2002 and 2021, <https://www.stat.gov.mk/OblastOpsto.aspx?id=31>

All these changes show that North Macedonia is facing significant decline of the resident population, as well as intensified demographic aging. It has great influence on the scope of the basic functional contingents.

2. BASIC FUNCTIONAL CONTINGENTS OF THE POPULATION

Accelerated demographic ageing in last two decades is complemented with great and very unfavorable changes in the basic functional contingents of the resident population in North Macedonia. They indicate that in 2021 compared to 2002 the number of children (0-14) is lower by 115 thousand persons, the number of young people (15-29) for 154 thousand and of the working-age population for about 171 thousand persons. Equally unfavorable are the changes in the reproductive base of the population (Table 2). The number of female fertile population in 2021 compared to 2002 is lower by 112 thousand persons and of women on optimal reproductive age for 57 thousand. At the same time great increase of older population and progressive demographic aging of this contingent has happened.

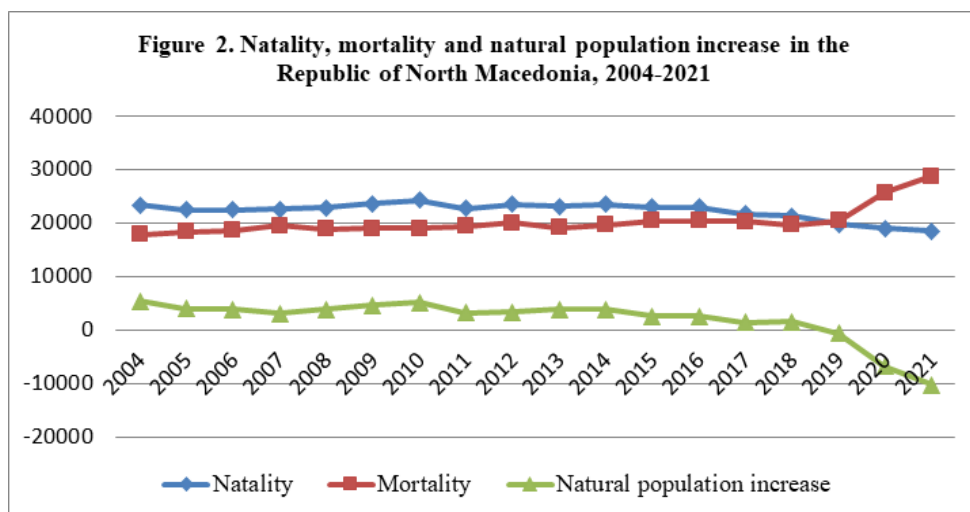
Table 2. Main age-sex contingents of the population in North Macedonia, 2002 and 2021

	Number		Increase / decrease (in %)	Share (in %) of total population	
	2002	2021		2002	2021
Children (0-14)	426280	311347	-27.0	21.1	17.0
Young population (15-29)	480828	326733	-32.0	23.8	17.8
Working-age population (15-64)	1381352	1210035	-12.4	68.3	65.9
Female fertile population (15-49)	522355	410739	-21.4	25.8	22.4
Women on optimal reproductive age (20-34)	226597	169232	-25.3	11.2	9.2
Population aged 65+	213712	315331	47.5	10.6	17.2
Population aged 80+	26916	56084	108.4	1.3	3.1

Source: State Statistical Office of the Republic of North Macedonia, Population Census data, 2002 and 2021.

The great decrease of the resident population in the country mainly is caused by the intensified permanent emigration abroad, which in the last two decades took on the character of an exodus. The available data of international organizations shows that in 2020 the number of Macedonian citizens abroad amounts almost about 700 thousand persons.⁵ Permanent emigration mainly includes the young population and young married couples, which caused a continuous increase in the number of children born abroad. Available data show that as of 2020, the share of children born abroad compared to live births in the country reached more than 25%. Since 2015, the impact of natural increase on the population growth has been increasingly emphasized, due to its declining trend and negative sign from 2019, caused by a large mortality increase (Figure 2). Compared to 2019, the mortality in 2020 is higher for 26%, while in 2021 for almost 41%.

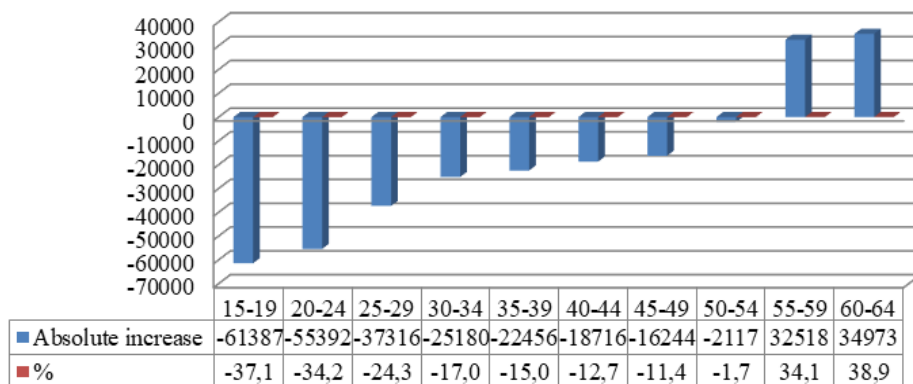
⁵ European Commission, Atlas of Migration 2021, <https://publications.jrc.ec.europa.eu/repository/handle/JRC127608>, EU, 2021, p. 100



Source: State Statistical Office of the Republic of North Macedonia, Population Census data, 2002 and 2021

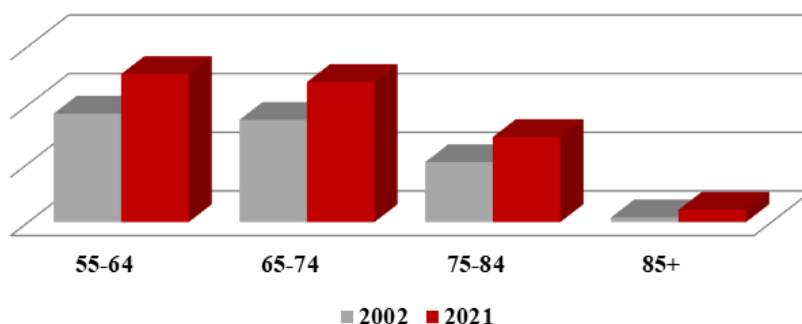
In the period 2002-2021 the changes of the working-age population are most emphasized for the young population (15-29), that noticed decline of almost one third (32%). It means serious decline in the inflow of new generations of working-age population and young labour force, as well as their intensified demographic aging (Figure 3). In the observed period an increase is characteristic only for the working-age population aged 55-64 years (for almost 68 thousand persons, or for 36.5%).

The available human resources are and will remain a key determinant for the economic development of the country. The demographic aging, mainly caused by emigration of young and educated population, implies great changes and numerous challenges, in terms of lack of labour force and rising mismatch of the labour market's supply and demand. They can be seen in two main segments. Firstly, the shrink of the new generations who will enter the educational process, will result in smaller number of skilled and educated working-age population who will enter the labour market if they stay in the country. Secondly, the aging of the existing labour force is reducing the opportunities for absorption of new knowledge and skills, necessary to raise the human capital level.

Figure 3. Changes of the working-age population of the Republic of North Macedonia in the period 2002-2021, by five year age groups

Source: State Statistical Office of the Republic of North Macedonia, Population Census data, 2002 and 2021

In the inter-census period 2002-2021, the population aged 65+ increased by 47.5% and was complemented by significant changes in its age structure, due to a great increase in the age group 75-84 (for 41.7%) and more than doubled number of persons aged 85+, reaching 21 thousand persons in 2021 (Figure 4). The increase of the population aged 55-64 shows that this trend will be even more pronounced in the next decade.

Figure 4. Changes of the population aged 55 and over in Republic of North Macedonia, 2002 and 2021

Source: State Statistical Office of the Republic of North Macedonia, Population Census data, 2002 and 2021

Changes in each of these contingents indicate that the country is already facing problems and challenges for its demographic and socio-economic development. They are imposing need for more comprehensive approach to policy-oriented data collection and analysis, which can help to develop appropriate policies.

3. CHALLENGES AND POLICIES RELATED TO DEMOGRAPHIC AGEING

The current unfavorable demographic situation is implying numerous consequences related to the demographic and socio-economic development of North Macedonia, on mid and long term. Small number of children, due to the intensified emigration abroad and decreased natural population increase in the country, will imply narrowed reproductive base of the resident population and won't be able to replace the large cohorts that exit the labour market due to aging. At the same time rising old age contingent should be expected.

In these circumstances, the country is facing three major challenges related to: the enormous decrease of the resident population, the decline of the young working-age population, as well as the rapid growth and aging of the elderly population. Each of them is equally complex and requires great attention and comprehensive activities of the policy makers in the country.

a) *Slowing down the resident population decrease.* Population census 2021 confirmed that emigration abroad is a key determinant of large and very unfavorable demographic changes in North Macedonia. The reasons for the intensified emigration abroad correspond with the socio-economic development of the country. The increase of the highly educated persons' unemployment; underestimation of the expertise; limited possibilities to advance in the career have contributed to intensification of the intellectual emigration. The increase of the number of Macedonian citizens abroad is also a result of the rising second and third generations, as well as due to the transformation of the temporary emigration to permanent. Changes on the labour markets of the receiving countries and their immigration policies are one of the key determinants for increased emigration and of the older mid-age population and highly educated persons (engineers, medical staff and others).

The problem of emigration abroad is recognized in the *Resolution of the Migration Policy for the period 2021-2025*, where one of the strategic goals is to reduce the intensity of permanent emigration abroad, with special focus on persons with high level of education, through continuous addressing of the

reasons for emigration.⁶ This strategic goal should be achieved through realization of two concrete objectives:⁷

- Minimizing unfavorable drivers and structural factors that force people to permanently leave their country of origin.
- Improving the accessibility and flexibility of ways for regular circular migration.

At the same time, it is necessary to mitigate the rapid and sharp decline in natural population increase, mainly determined by the large mortality growth, which in 2020 and 2021 has reached historically the highest level, since Second World War. Urgent and consistent action is required for both components of the natural population increase. Rising fertility and live births in the country should be achieved in the circumstances of a narrowed reproductive base of the population, through strong support of natality and family. Given the characteristics of low fertility and its consequences, then the main features and determinants of the fertility changes, the fertility policy should cover four areas of intervention: pro-natalist policies; financial incentives; marriage; work-life balance.⁸ Great attention for reducing the growing mortality should be devoted, through comprehensive preventive activities of the health system in post Covid-19 period.

Most of the researches on the changes in the mortality, particularly from the start of the Covid-19 pandemic, show that the increase in the total mortality was mostly caused by Covid-19, but also by the growth of non-Covid deaths. It was accompanied with significant changes in the number and structure of non-Covid deaths by other diseases, seen in decrease of the share of previously most represented diseases. There are many determinants for such modifications in the mortality structure, including the public health policies, capacities of health systems and their overload, reduced possibilities for regular health controls, individual risk factors and attitudes to restriction measures, individual fears of contracting the disease, etc.⁹

⁶ Government of the Republic of North Macedonia, Resolution of the Migration Policy for the period 2021-2025, Official Gazette of North Macedonia, No. 290/2021, 23.12.2021, p. 44

⁷ Ibid., p. 50

⁸ Janeska V., Lozanoska A., Fertility Changes in the Balkan Countries - Main Features and Challenges of the Below-Replacement Fertility, Proceedings from the Fifth International Conference of the Balkans Demography: The Population of the Balkans at the Dawn of the 21st Century, Skopje, 2017, p.22

⁹ Janeska V., Lozanoska A., Impact of Covid-19 pandemic on the mortality in Republic of North Macedonia, Economic Development, Year. 24 No. 1/2022, Institute of Economics-Skopje, 2022, p. 56

b) Mitigation of the consequences related to the working-age population decrease and lack of labour force. The impact of working-age population aging is negatively reflected on the volume and structure of the available labour force, imposing problems for the economic growth, competitiveness, etc. In current situation of the working-age population decrease and lack of labour force, the attention of North Macedonia should be focused on:¹⁰

- Reforms in all levels of educational process, in order to meet the labour market needs;
- Support of the lifelong learning process and continuous skill improvements of the employees;
- Investments in new technology and digitalization, as well as providing necessary labour force skills;
- Adjustment of labour market programmes, creation of flexible labour market policies and providing job security;
- Retention of young and educated labour force in the country, through appropriate talent management;
- Promotion of new management style and organizational culture.

In terms of the working-age population decrease and intensified aging of the existing labour force, technological changes can provide valuable help, stepping in some areas where human resources are lacking. The mutual effects of demographic and technological changes can be seen in the changes of labour supply, affecting the factor prices and altering the relative profitability of labour-intensive and automated sectors. Also, demographic changes influence the savings and the interest rate, shifting the amount of resources available for investment in capital accumulation, innovation, and automation. Based on these aspects it can be noted that a fall in fertility, accompanied with working-age population shrink, leads the economy to a new balanced growth path with lower GDP per capita growth, a higher degree of automation, and a lower labour income share.¹¹

Another impact of population aging particularly on the economic development is the change of demand and consumption structure. Some economic sectors will develop (services for older people such as medical services and food services), while others (education, transport, recreation and consumer

¹⁰ Janeska V., Lozanoska A., Impact of Digitalization on the Labour Market: The Case of North Macedonia, *Economic Analysis* (2021, Vol. 54, No. 1, 24-40), p. 38

¹¹ **Basso Henrique, Jimeno F. Juan**, Demographics and technology explain secular stagnation and more, <https://voxeu.org/article/demographics-and-technology-explain-secular-stagnation-and-more>, 2019

goods, housing services) will stagnate. This may require significant shifts between sectors and increase occupational mobility (inside and outside national borders), which in turn can lead, at least in the short term, to productivity decreases, if most of the newcomers have a relatively low qualification in the new field.¹²

c) Intercepting the implications of rapid growth and elderly population aging. The significant increase in the number of older population imposes a burden on the sustainability of the pension system in North Macedonia. It will be a big challenge, particularly in terms of decrease of the young working-age population and unfavorable situation on the labour market. At the same time, there is a need to adapt the health care system to the growing number of elderly population. A current and expected change in the demographic profile of the older population implicates needs for social care of the elderly persons, particularly related to the capacities for their institutional accommodation and implementation of different forms for non-institutional care.¹³

Also, it is very important to note that ageing require use of the underused human potential in the country. It is very difficult to sustain the living standard when a rapidly growing proportion of the population is dependent on the contributions from others and when their possibilities to participate and contribute according to their abilities are limited. Older persons have accumulated expertise, knowledge and experience and can therefore contribute a lot. Therefore, one of the necessary steps is to integrate older persons into the policymaking process and to encourage those who wish and can stay in their jobs longer.

Population aging needs all service provisions and systems to be made more efficient, bigger support to families which are taking care for their older members (by adapting their work schedules, or compensating them for the caring time) and supporting family relationships. Therefore, it is necessary seriously to address the imposed challenges by: overcoming the lack of capacities for accommodation of the elderly persons in the public and private homes; consistent implementation of the norms and standards for founding and start of work of the institutions for social protection of elderly persons; improvement

¹² Serban Andreea Claudia, Aging population and effects on labour market, International Conference On Applied Economics (ICOAE) 2012, Procedia Economics and Finance 1, 2012, p. 361

¹³ Janeska V., Lozanoska A., Changes in the older population of the Republic of Macedonia and social protection challenges, Economic Development, Year.19 No. 1-2/2017, Institute of Economics-Skopje, 2017, p. 27-31

of the knowledge and skills of the personnel who work with the elderly persons; greater representation of different forms for non-institutional protection; further improvement and more coordinated cooperation among the institutions that settle elderly persons (on national and local level), the private sector and NGO's; profound studies for different aspects of the elderly population as pre-condition for identification of their specific needs.¹⁴

Efforts should be made to adapt social protection systems, labour market, health and care to the older population needs. These are the areas which are very directly related to the sustainability of public finances. However, it will be crucial to pay attention to issues that go beyond those motivated by fiscal concerns. It is important to achieve a change in the mindset, which means loosening assumptions on stereotypic roles for different stages of life, in favor of more flexible views that accommodate the active participation in society of people of all ages.¹⁵ Therefore, it is very important to keep people of all ages integrated into society and to provide ways of their participation.

Conclusion:

The 2021 Population census showed that North Macedonia is facing a very unfavorable demographic situation. The reduction of the resident population and the accelerated population aging are accompanied with significant decline of all basic functional contingents of the population, except population aged 65+. Intensified permanent emigration abroad of young and mid age population in last two decades is key determinant for manifested changes of the resident population with numerous and long-term consequences on the demographic and socio-economic development of the country.

In these circumstances, the country is facing three major challenges which refer to: slowing down the resident population decrease, mitigation the consequences related to the working-age population decrease and lack of labour force, as well as intercepting the implications of rapid growth and elderly population aging. Complexity and mutual conditioning of these challenges, determined by the accelerated population aging, imposes need for wide-ranging, comprehensive and coordinated activities of the policy makers in the country, on mid and long term. Therefore, it is necessary to have policy-oriented data collection and analysis, which can help to develop appropriate and feasible

¹⁴ Ibid., p.32

¹⁵ UNECE, Challenges and opportunities of population aging, https://unece.org/DAM/highlights/what_ECE_does/English/0726054_UNECE_AGEING.pdf

policies. Due to their complexity these policies should be interconnected and related with each other, considering the identified necessary measures and actions in all of them.

Indisputable interrelation of the policies in all these areas require creation and of a comprehensive strategy for family. It should include all relevant aspects related to promoting the position and sustainability of the family, strengthening the role of the marital community, increasing the quality of child care, better educational system, increasing the employment and living standard, improving health and social care, enhancing family support, including care for older family members, etc. The implementation of such a strategy for family should contribute to improving the well-being of families and care for children and strengthening social cohesion in the family. They are important prerequisites for the increase of marriages and births, as well as the retention of young people in the country, leading to decrease of the emigration abroad and mitigation of its long-term and far-reaching consequences.

The strategy for the family of North Macedonia should be based on the principles of protection of human rights and freedom, solidarity, long-term macroeconomic benefit and historical responsibility. For that purpose, the country should continue to adapt the national legislation in the field of the family in accordance with international standards and the legislation of the European Union. In view of the complexity of the family issue, in the operationalization of the identified proposals in concrete activities and measures, it is necessary to coordinate the mutual cooperation of all competent authorities and institutions, as well as to specify the competences for particular aspects in the area of the family and the family life.

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