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Instituto Nacional de Estatística
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Census, Revision, Projections
Experiences from the Republic of North Macedonia

Estoril 4 to 7 June 2024.

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1. Introduction
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4. Census 2021
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7. Overall conclusions

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1. Introduction

- Last official was Census 2002

- 2011 Census was discontinued due to irrevocable resignation about different political interpretation of the definition of - Total Population

- Success of the 2021 Census is due to the use of the combined census method and established an IT Census Data System which managed to methodologically circumvent the challenges that proved to be insurmountable in the unsuccessful Census 2011

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2. Preparations for developing the PCD (pre-census database)

- Working Group that visited all State institutions
- Two groups of institutions: Primary Institutions and Secondary Institutions
- Primary institutions were subjected to additional data analysis

1. Basic analysis of an administrative source;
2. Data accuracy (de facto versus de jure registered status);
3. Availability (data availability frequency);
4. Completeness of data;
5. Comparability (comparability of the same features in different registers); and
6. Legal basis for obtaining data.

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3. Test Census 2019 – goals

1. Testing the functionality of the application, the GIS part and the Methodological part;
2. Testing of the IT Census Data System and two-way data transfer and Internet availability;
3. Testing the quality of the data in PCD and changing certain data;
4. Testing the methodological approach and quality and volume of acquired knowledge by enumerators during the training;
5. Testing of data protection and built-in solutions that prevented data manipulation;
6. Testing the acceptability by citizens and the general public;

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3. Test Census 2019 – results

1. Application incorporated a completely autonomous enumeration for each person based solely on the answers given;
2. Enumerator's role as a technical person who should follow the methodology was reduced to a technical person;
3. Application recognized 44 different groups of questions (like 44 different questionnaires);
4. It recognized automatically which of the enumerated persons was part of the total population;
5. The methodological solution was incorporated in the development of the application for self-enumeration from abroad;
6. Final Pre-census database (PCD) contained 6+1 administrative source of data;

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4. Census 2021

Enumerated population	Number	Share (%)		Population Stock	Number	Share (%)
Total	2 192 778	100.00		Total	2 097 319	100.00
Field data	1 855 249	84.61		Usual resident population (URP)	1 836 713	87.57
Web data	204 804	9.34		Temporary present population	1 674	0.08
Imputed records	132 725	6.05		Population living abroad	258 932	12.35

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5. Revision of the series of estimates of the population

1. Methodological approach to revise the total population between the census of 2021 and 2002 took place in two stages;
2. First stage, the SSO conducted an activity based on PIN (sex, age and official address) to recognize all persons enumerated in the 2002 Census who are part of the Total Population enumerated in the 2021;
3. Difference between the data from the revision based on the methodological approach in the first stage developed in the SSO and the 2021 Census was about 6500 persons, or in percentage about 0.3%.
4. Second stage, based on the data prepared in the first stage a mathematical calculation was made based on a adjusted interpolation model;

6. Population projections to 2070 - hypothesis

In the calculation of population projections, it has been selected 7 projection variants.

1) Low fertility variant;
2) Medium fertility variant;
3) High fertility variant;
4) Constant fertility variant;
5) Constant mortality variant;
6) Constant variant; and,
7) Zero-migration variant.

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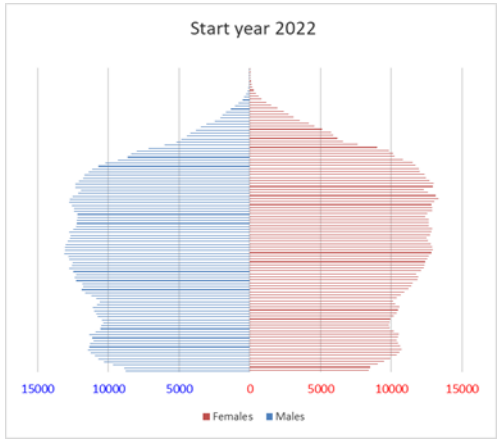
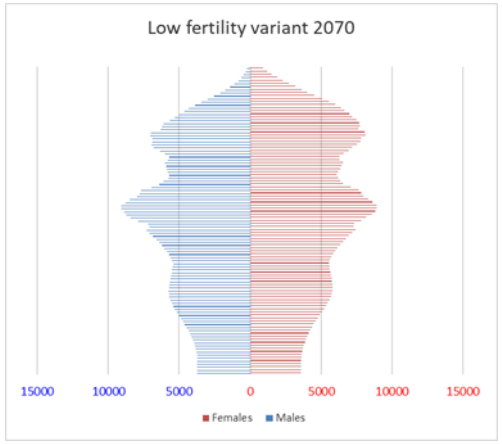
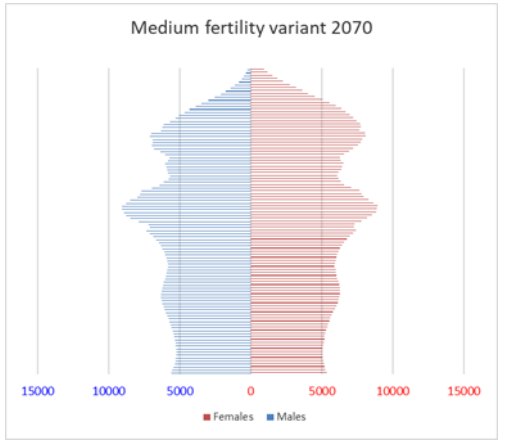
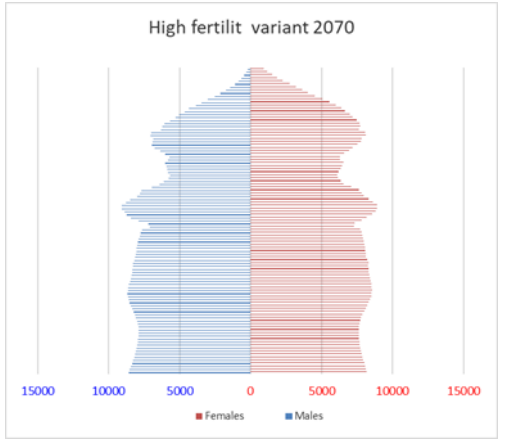
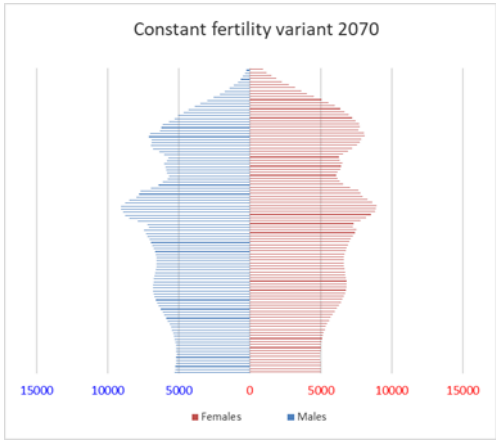
6. Population projections to 2070 – population pyramids

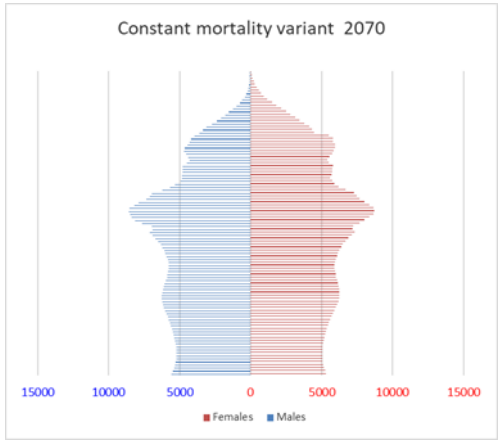


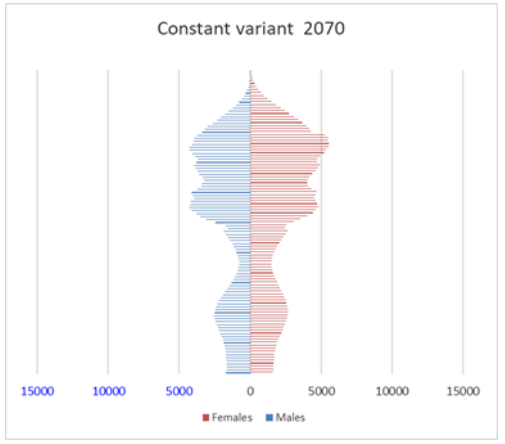


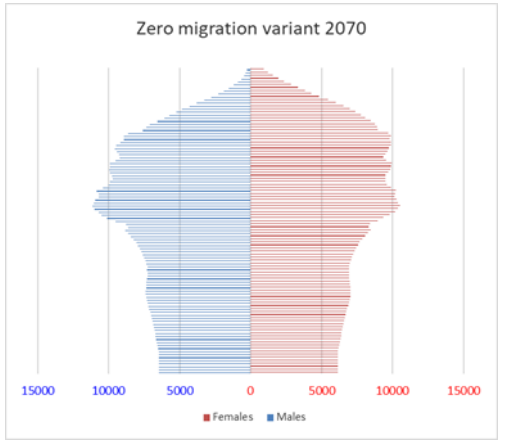












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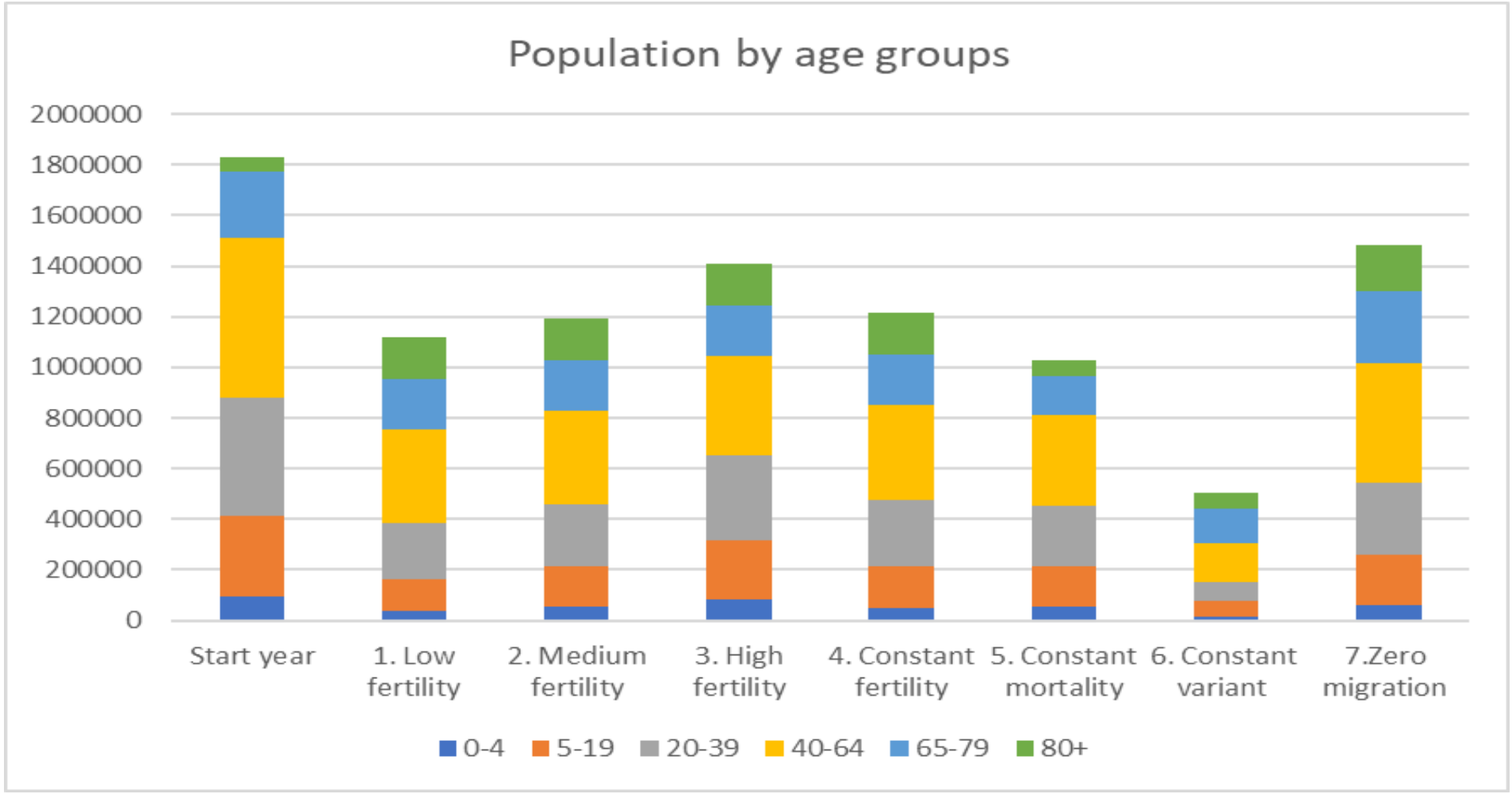
6. Population projections to 2070 – population by age groups



6. Population projections to 2070 - conclusions

- None of the seven variants show stabilization or increase in population size.
- The current conditions of the age structure, the low level of fertility, the mortality rates and the factors that determine migration movements are directly responsible for the calculated values.
- The results of the analyzed data from the population projections indicate that in the foreseeable future it is difficult to expect an improvement in the demographic situation if appropriate solutions are not intervened.

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7. Overall conclusions

1. All activities about Census 2021 were successful.

2. During this activities SSO gain huge experience and knowledge.

3. SSO is confident that can share experience and knowledge with other SSO's as a direct support or consultation about all aspects of this proceses.

4. SSO is confident that can conduct Census 2031 only from registers and all focus is in that direction.

5. More detail information can be obtained from the References

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Thank you for your attention

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