

## REVIEW OF THE MONOGRAPH “MORTALITY TRENDS BY CAUSES OF DEATH IN THE REPUBLIC OF MOLDOVA, 1965-2020”.

Authors: Olga Penina, France Meslé and Jacques Vall

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**Olga GAGAUZ,**

Habilitated doctor, associate professor

National Institute for Economic Research, Moldova

ORCID ID: <https://orcid.org/0000-0002-1175-1008>

[gagauz\\_olga@ince.md](mailto:gagauz_olga@ince.md)

The research monograph “Mortality trends by causes of death in the Republic of Moldova, 1965-2020” is dedicated to a topic with particular importance, taking into account the fact that mortality trends have a significant impact on the population reproduction process determining the dimensions of the natural increase and the pace of the demographic ageing process. Despite a recent increase in life expectancy observed in the pre-pandemic period, the Republic of Moldova has been facing a population health crisis manifested through the maintenance of a significant discrepancy compared to the European level. During several decades, the Republic of Moldova has not managed to obtain sustainable progress in life expectancy growth, unlike Western countries that benefited from a constant increase of the indicator in the 70s of the last century due to a striking reduction in cardiovascular mortality. A high level of premature mortality among the adult population in the Republic of Moldova leads to harmful premises from a demographic point of view, determining significant human potential losses.

The monograph “Mortality trends by causes of death in the Republic of Moldova, 1965-202” represents the result of the prolonged scientific activity of Olga Penina as well as her fruitful collaboration with known demographers France Meslé and Jacques Vallin from the French Institute for Demographic Studies or INED. The manuscript is distinguished through the use of a special reconstruction method of the continuity of death time series by cause developed by France Meslé and Jacques Vallin. Further, particular attention is given to data quality problems and correction methods, which ensure reliable mortality estimates over different periods. It is known that mortality data quality for the Soviet period does not entirely meet the corresponding standards. Incomplete registration of infant deaths and underestimation of old-age mortality resulted in an overestimation of life expectancy at birth in the Republic of Moldova until the late 70s of the last century. This problem needs the application of particular correction methods

while studying mortality for this period, which the authors have successfully realized.

In the Republic of Moldova, during the period of independence, the discrepancy between the national migration definitions and the European standards, as well as the difficulties in producing reliable migrational flows, caused considerable population overestimation and, consequently, the underestimation of life expectancy at birth. This problem was solved by producing the 1959-2013 intercensal population estimates prolonged with the official postcensal estimates for 2014-2020. Applying the corrected population counts in computing mortality indicators contributed to reliable life expectancy estimates for the period of independence.

The monograph represents a comprehensive analysis of long-term mortality trends by cause of death in the Republic of Moldova. The manuscript consists of five chapters. The first chapter focuses on the evolution of mortality by age and sex in the Republic of Moldova during the second half of the XXth century and the beginning of the XXIst century. The system of death registration in the Soviet period and after independence is described, and mortality data quality issues are examined, in particular, infant and old-age mortality rates. Available population counts are analyzed, and some methods of incomplete data corrections are presented. The impact of mortality corrections on life expectancy at birth and trends in age-specific mortality is shown. The second chapter describes the system of registration of causes of death and presents information related to the collected data, and some issues concerning the codification of causes of death, especially in the Soviet period. The third chapter describes the reconstruction of the mortality series by detailed causes of death under the 10th revision of the International Classification of Diseases and Causes of death with specific examples. The fourth chapter presents a comparative analysis of the reconstructed mortality series by sex and leading causes of death since the mid-60s of

the last century in the Republic of Moldova and Ukraine. The fifth chapter examines the reconstructed mortality series by sex, age and detailed causes of death.

The comprehensive study let the authors formulate essential conclusions concerning the most vulnerable points in mortality evolution in the Republic of Moldova, which represents a particular interest for researchers in population studies and policymakers. The unfavourable situation in the population's health is determined by low living standards and growing segments of the marginalized population, where the risk of dying from external causes of death and causes associated with excessive alcohol consumption is high. The mortality pattern in the Republic of Moldova is characterized by a very high level of mortality from cardiovascular diseases, liver cirrhosis, a continuing growth or

stagnation of mortality attributable to suicides and transport accidents, an increasing burden of cancer mortality, in particular, breast cancer and intestine cancer, as well as unfavourable trends in mortality from pneumonia among the adult population.

The monograph is distinguished by the highly scientific approach to the topicality and includes tables, graphs and annexes, contributing to the clear perception of the presented material. The data correction methods and the methodology of death time reconstruction are described in detail: correspondence tables, coefficients of transitions and fundamental associations of items. The bibliography covers the most relevant sources and contributes to the foundation of the explanatory framework regarding the evolution of mortality in the Republic of Moldova.

The monograph is available online <https://hal.archives-ouvertes.fr/hal-03781912v1>

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