

Possible Explanations of the Divergence in the Recent Mortality Trends among Belarus, Lithuania, and Russia

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INTRODUCTION

Before the collapse of the Soviet Union in 1991, Belarus, Lithuania and Russia were quite comparable in terms of the socio-economic development. Despite some differences in overall mortality levels, they were also very close to each other in terms of directions of mortality trends and age- and cause-specific mortality patterns. After 1991, these countries experienced substantial political and social transformations accompanied by challenges of the transition from communist regimes towards market economy systems. The sudden changes brought numerous problems such as the rapid unemployment growth, falling of living standards, growing social and income inequalities. The mentioned above factors contributed to the significant deterioration of the health situation but the toll of the mortality crisis differed from country to country. Remarkable similarities in socio-economic and mortality trends among countries until 1991 contrast to their notable divergence during the subsequent years. Russia and Lithuania have chosen more radical ways of economic and political transformations which led to massive privatization campaigns and the establishment of fully functioning market economies in these countries. The reforms were more sustainable and systematic in Lithuania than in Russia. On the contrary, Belarus has chosen a gradual and slow transition path; it still maintains the economic system having main features of the old fashioned planned economy established during the Soviet era. The main aim of this paper is to explore whether mortality trends in Belarus, Lithuania and Russia resemble such divergent trajectories of political and socio-economic changes. Incorporating the cause of death analysis into the present comparative study aims at shedding more light on possible determinants of the recent variation in mortality levels among countries.

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DATA AND METHODS

The analysis covers the period 1980-2005 and refers to three former Soviet republics: Russia, Belarus, and Lithuania. The study is based on mortality data obtained from the Human Mortality Database (HMD)¹, WHO Mortality Database², original statistical data on causes (tables in electronic format), and available aggregated data on economic indicators obtained from TransMonee Database³ and World Income Inequality Database (WIID2)⁴. The data on the economic indicators include such indicators as Gross Domestic Product at purchasing power parity per capita (GDP per capita \$PPP), Gini coefficient. Unlike mortality data, these data are less reliable, consistent, and comparable. They are collected from different sources and, therefore, do not always follow the same methodology. Depending on an objective, both the preliminary descriptive analysis approach and more advanced demographic techniques are utilized. The analysis of the socio-economic development is based on the descriptive approach. Conventional demographic methods, such as life table decomposition techniques are widely employed in analyzing the mortality trends by age and causes of death.

SOME PRELIMINARY RESULTS

Before 1991, the dynamics of male life expectancy in Belarus, Lithuania and Russia were very similar; Belarus and Lithuania had even almost identical trends (see Figure below). The male life expectancy as well as female life expectancy (not presented here) in both countries was higher than in Russia during the entire period since 1980.

Anti-alcohol campaign had a very positive impact on the dynamics of the male life expectancy in all three countries. During 1984-1986 it increased by 3.1 years in Russia, the corresponding figures in Lithuania and Belarus were 2.3 and 2.6 years, respectively.

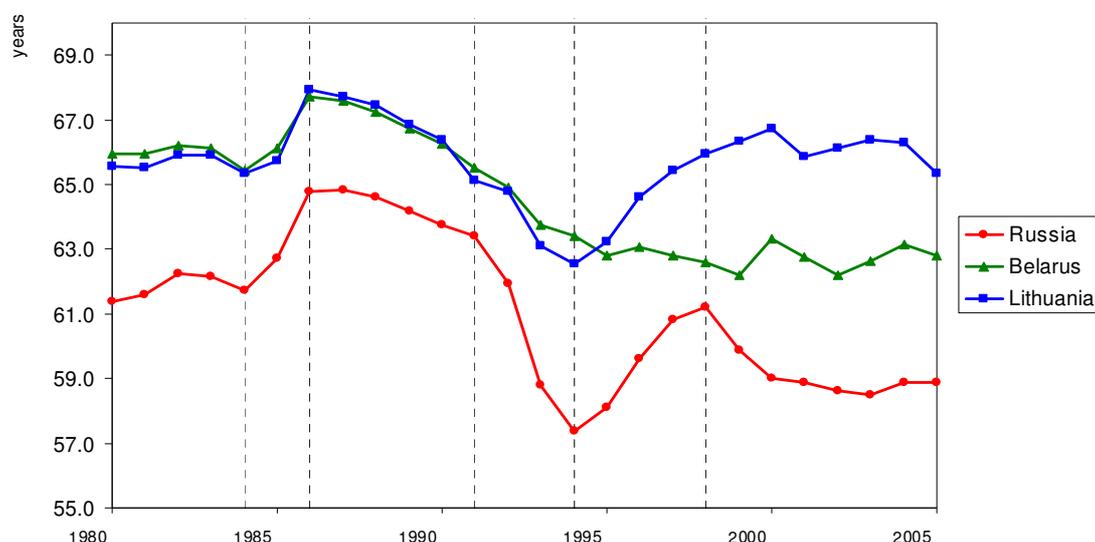
¹ <http://www.mortality.org/>

² <http://www.who.int>

³ <http://www.unicef-irc.org/databases/transmonee/>

⁴ http://www.wider.unu.edu/research/Database/en_GB/database/

Life expectancy at birth in Russia, Belarus, and Lithuania; males; 1980-2005



Source: Human Mortality Database

In 1986, when the anti-alcohol campaign died away, the male mortality resumed growing again in all countries. With the collapse of the USSR the mortality trends in Belarus, Lithuania and Russia became more diverse. Between 1991 and 1994 male life expectancy in Belarus and Lithuania decreased by 2.1 and 2.6 years, respectively. However, such decrease was incomparable with the unprecedented decline in life expectancy by about 6 years in Russia. In 1995, the male life expectancy in Russia and Lithuania started growing while in Belarus it continued declining. In overall, the period 1995-2000 can be characterized as period of the remarkable divergence in life expectancy. After 2000 the trends in male life expectancy in all countries did not revealed considerable fluctuations. This period can be characterized as a period of mortality stagnation.

To sum up, the most recent mortality trends in Belarus do not give the reasons for optimism. Even though Belarus preserved many features of the old socialist system and avoided the drastic mortality increase in the early 90's, the mortality was growing substantially and longer than in Russia and Lithuania; deaths were not avoided, they were just postponed for a short period of time. The situation in Lithuania looks much better; this country managed to recover from the consequences of the socio-economic crisis and achieve significant improvement in life expectancy during 1994-2000. However, around 2000 this progress slowed down which raised doubt about the sustainability of the improvement of health situation in Lithuania.