Mortality trends observed in the past twenty years have shown different directions and thus some new divisions have been created. While populations in most of the developed countries have experienced a continued decline in death rates and therefore started being more homogeneous, in post-communist countries the trends have mostly shown various directions and the country heterogeneity has consequently deepened. Confronting mortality levels and patterns before and after political changes occurring at the turn of 1990’s is therefore a relevant topic.

In her PhD thesis Zhanyl Mukhtarova primarily compares mortality patterns according to the main causes of death between 1985 and 2005 in the postcommunist countries of Central Asia, Central Europe and the Baltic region with low mortality populations such as those of France, Spain and the USA. The PhD thesis consists of 166 pages including the annex. It is divided into five chapters, an introduction, and a conclusion. The first introductory chapter delimits the objectives and the structure of the thesis. The research purpose, research questions, and research hypotheses are well defined. The aims are clearly delimited, i.e. to examine: differences in total mortality measured by life expectancy at birth, differences in cause-specific mortality levels by main causes of death, relative frequency of the standardized death rates by main causes of death, excess male mortality by main causes of death, and age-standardized (15–64 and 65+) death rates by main causes of death. The next chapter presents the reader with a comprehensive overview of the literature used for the thesis. Main focus is on the epidemiological transition theories, which provide an overall view on the society's evolution from high mortality to a modern society experiencing low mortality levels. Data sources and basic methodological issues for mortality analysis are provided in the third chapter. The author also provides information about data quality and concentrates more particularly on the Soviet and WHO definitions of live birth and stillbirth as well as the specific causes of death coding. In addition, the differences in the proportion of ill-defined causes are mentioned. A description of general mortality conditions measured by life expectancy change and decomposition of life expectancy by age and main causes of death between 1985 and 2005 introduce the reader to the topic. Series of graphs showing the age-
cause contributions to the differential in life expectancy at birth for selected pairs of countries in 2005 clearly illustrate the delay in survival related to old ages and specific causes. The core analysis is outlined in the fifth and sixth chapter where cause-specific mortality patterns and the changes over time are presented. After comparative graphs, the thesis continues with more in depth analysis of the cause-specific mortality level and country classification using the approach of cluster analysis. The cluster analysis approach has been systematically applied in further research dealing with relative frequencies, broader age groups (15-64 and 65+) or excess male mortality.

There are some points to be contested. Page 38 „The age-standardized death rate is a weighted average of the age-specific mortality rates per 100,000 persons, where the weights are the proportions of persons in the corresponding age groups of the WHO standard population. The cause mortality rate or cause-specific mortality rate is generally expressed per 1,000 populations“. The opposite is true: the age-standardized death rate is usually expressed per 1000 and cause-specific mortality rate is usually expressed per 100,000. Formats of tables 15, 17, 19, 23, 27, 31, 35, 39, 43, 47, 53, 59 could be better executed. Last point/question is methodological, therefore I would like to know the justification why for clustering by mortality cause levels the all cause mortality entered the analysis? However, despite those omissions I recommend the proposed doctoral thesis to be accepted for submission.

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