

**Opponent's evaluation of the Master Thesis of Zhanyl Mukhtarova  
„Mortality patterns and trends in post-communist countries compared with low mortality  
populations“**

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The Master Thesis written by Zhanyl Mukhtarova „*Mortality patterns and trends in post-communist countries compared with low mortality populations*“ has 110 pages including the lists of abbreviations, tables and figures, references and also the short but useful methodological appendix. The aim of the thesis is to analyze mortality patterns and trends in selected post-communist countries and contrast them with several low mortality populations in the period from 1990 to 2006. The structure of the thesis is clear with 5 objectives set in the introductory part leading to the goal of the work, and 4 main hypotheses tested in the text.

The text of the thesis is systematically divided into 4 main chapters; the first one is the theoretical background of the work. One can find there the overview of related literature and sources or the methodology and data used in the analytical part of the work. Before all the strong methodological background should be mentioned – it itself could be used as a source of information for any other thesis focused on mortality development in latest period. Unfortunately some minor inaccuracies could be found too – for example in the equation of infant mortality rate (page 28) the first fraction should be enclosed in parentheses – the current form of expression would result in underestimated values. Or it is not clear why  $l_0$  is defined as “*the number of survivors and the hypothetical number of individuals who stay alive at the exact age of 0 out of 100 000 live births, given the mortality conditions of the reference period*”, when  $l_0$  is simply the radix of the table or the hypothetical number of life births and doesn't depend on the mortality conditions at all.

The second chapter is devoted to the description of the historical development and changes in mortality in analyzed countries. Only the main features of the mortality process are briefly mentioned about all the analyzed countries (except of France – there is no reason given for omitting France in this description). An independent part of this chapter informs about longevity from several points of view, in this section sometimes the citations are missing.

The next chapter informs the reader about the demographic and socio-economic background in analyzed countries and could be taken as the transition to the analytical part of the thesis. At the end of this chapter, there is the first hierarchical (cluster) analysis applied and analyzed countries are grouped according to introduced socio-economic characteristics. It should be mentioned that some of these characteristics entering the cluster analysis are strongly correlated, so it could be questionable whether all of them should have been involved (but the result probably would not be significantly different).

The fourth chapter clearly presents the analytical part of the work. Firstly the development of life expectancy is described and analyzed. The second part is the most important in this chapter and deals with the comparison of post-communist countries with selected low-mortality countries. The aim of this section is to study the age-specific mortality profiles and to compile a typology of country differences according to age-specific mortality intensities. For this purpose the cluster analysis is repeated separately for men, women or both sexes. Input for these analyses was the set of indicators characterising the level of mortality in various age groups at the beginning (year 1990) and at the end of analyzed period (year 2006). Finally in this chapter the gender-gap in mortality is briefly analyzed and the selected countries are grouped also according to this factor. Unfortunately the interpretation of “high” and “low” values is not entirely clear in this part.

In the thesis some typist's or typographical errors could be found, sometimes abbreviations which are not described in the list at the beginning are used, notes are often on other page then the figure to which relate. On page 47, there is a reference to the Figure no. 5, but there is not an illustration of maternal mortality ratios as expected but Human Development Index in selected countries. Also the number of Table cited on p. 64 should be 2 instead of 3, etc. It is not clear why the life expectancy in Figure 4 is marked in two different ways (as  $e_0$  and as  $e_x$  – for healthy and unhealthy life expectancy respectively) – in both cases the life expectancy at birth should be considered. The way of citation is not correct and accurate in all the cases. But all these imperfections are rather formal and cannot overshadow the high quality of the work, which is systematically built and logical, where the author used quite simple and clear way of description and analysis, and an exceptional range of sources of information or data was used.

**Based on the facts mentioned above, I propose this master thesis for acceptance.**

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