

## PEER REVIEW OF A MASTER THESIS

Title: Tempo and quantum of population ageing in the world: development opportunities and challenges (Faculty of Science, Charles University in Prague)

The main aim of the thesis is to identify and describe the scale and dynamics of ageing process on the macroregional level with respect to specific countries. This is to be done through analysis of quantum and tempo effects of demographic transition and ageing process, classification of countries based on the results of above mentioned analysis and finally examination of social conditions and opportunities or challenges of population ageing. It is obviously quite difficult to deliver some fresh contribution to already very intensively researched subject of population ageing, even more on a global level. Nevertheless, in my opinion, the thesis successfully connects the ageing process with general theory of demographic transition and theory of demographic window of opportunity and demographic dividends. Author is able to realize that the global process of ageing has got a serious broader consequences for economic development of countries through labor force growth or decline, and on the other hand also for state budgets with respect to health expenditures and pension system payments. Very useful result represents the tables of demographic windows of opportunity for all of the world subregions and selected countries (Tab. 13-16).

Therefore all of the six research aims and objectives (p. 14) were successfully met. Author has chosen proper methods and with respect to relevancy of the data produced cluster analysis based on five criteria. The thesis last chapters very well deal with social conditions and consequences of ageing for economic growth and broader social development of subregions and selected countries.

I have found two mistakes, which I consider rather not very important. The classification of the scale and dynamic of the demographic transition models in the world by sub-regions and selected countries (Tab. 6) is slightly biased by wrong selection of the basic scale unit division between long and short duration of demographic transition. The level at the length of 70 years (in 5y intervals) means that there is group of countries with length of 65 and 75 years, what can easily depend on statistical error or roundings (67,5y to 72,5y). That is why in this interval the scale distribution of countries should not peak, but there should be a local minimum of scale distribution profile. But out of 36 items, there are 14 items in 65-75 range, so as a result the very rough distinction to short and long interval (less than 70, more than 70) could be random. The more useful would be division of the length to three intervals (-60 with 4 items, 65-75 with above mentioned 14 items, and 80+ with 18 items). This generally represents length around 2, 3 and 4+ average intergeneration intervals.

Another mistake is not the author's own, but it is adopted through Bloom, Canning and Sevilla 2013 (Fig. 32). The model is (eventhough simplistic) true for income, but totally false for consumption. The consumption is not flat at all, not for developed and not even for developing countries, it varies substantially. The author is responsible not only for its original

thoughts and ideas or calculations, but also for the adopted ones. The fact, that the model is stupid, can be realized after a brief check.

Finally, the style and grammar of the thesis is at a very high level, with just a few typos or other grammar mistakes. Just to mention some of them, on p. 44 low, „NIR can decline to as low as 0,65% per year“, there should had been -0,65%. Instead of million on p. 81, there should stand billion. The term „pensionable age“ (p.74) or „oldest old“ are also not very common, better is „retirement age“ and „very old“.

The chapters 3.1. and 3.2. are in my view excessively explanatory and descriptive. The master thesis in demography does not have to describe the CDR or TFR in such a detail. These terms are for all of the prospective readers a basic terminology and there is no risk of double definition.

Overall, I recomend the thesis for acceptance. It not only meets the requirements for master thesis in the field of demography, but even surpasses them.

Daniel Sokol

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