

## **Opponent's Assessment of a Doctoral Thesis**

### **Murat Narkulov: Demographic Approach to Measuring Human Capital in Kazakhstan**

The theme of the thesis is very actual – the concept of the human capital of a population and methods of its measuring. The author describes several methods: two of them (the first based on education level and the second based on life-time labor income). are applied for calculations concerning the human capital of the Kazakhstan population.

The thesis is divided into nine chapters. First chapter is introductory, in the next two the author reviews at great lengths main concepts concerning the human capital and its aspects. The fourth chapter is particularly dedicated to various approaches and methods in measuring human capital (education-based, cost-based, income-based and other approaches).

The fifth chapter contains the overview of historical, demographic and social-economic development of Kazakhstan with accenting the differences between the Soviet era and the period of independence. The regional differences are also taken into account. The next two chapters bring the results of measuring of the human capital in Kazakhstan by education-based approach and by life-time labor income based approach. Closing chapters bring a remark on application of life tables in human capital measurement and summary and conclusions of the thesis.

The main author's contributions of the thesis are the results of measuring human capital in Kazakhstan. The author presents the human capital development since 1959 until present time as well as the prognosis until 2050. The computations methods contain also sensitivity analysis and decomposition of changes in the human capital.

Numerical results of human capital analysis are presented in a large number of colored graphs and tables. The results presented are accompanied by rich verbal commentary. The number of references indicates that the author read large amount of books and papers concerning the topic.

The work has been written in very understandable manner, it is well organized and has noticeably good graphic arrangement.

On the other hand I have some little critical remarks (mainly of “technical” character), e.g.:

- The Graph 5.1. (p. 99) should be of XY-type (because the time values are not equidistant).

- It would be better to change the order of graphs in each of the pairs 6.8–6.9, 6.10–6.11 and 6.12–6.13 (first graph should show the previous development, the second one the future prospects) and to use the same scale for the Y axis.

Despite this little deficiencies the idea and concept of the thesis is very good and satisfies the requirements for doctoral thesis. Therefore I recommend accept it.

In Prague, September 13, 2010

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