

## HUMAN CAPITAL ECONOMICO-ECOLOGIC WELFARE AS A BASIS OF ITS COMPETITIVENESS

Z.V. Derkach – Sumy State University, postgraduate  
G.I. Litvinenko – K.f.n, docent

In general human capital is determined by genetic features, developed through upbringing and overall education while its success (competitiveness) depends on the material well-being, adequate stimulation of the institutional environment and the level of specific skills.

It is human capital, rather than plants, equipment, and inventories that is the cornerstone of competitiveness, economic growth and efficiency. It is time to learn how to measure the value of this wealth and the factors affecting it. The very fact of attempts to assess it will help to change the views of managers, their approach to human capital not just as a cost factor but as an enterprise asset that must be wisely used to improve competitiveness.

The competitiveness of the enterprise means its advantage over other enterprises of a certain industry sector within the country and abroad. A human being is a link that provides the most efficient use of company resources, which can be used to improve competitiveness.

However, health and environmental medicine must be open to public and used for the solution of problems of increasing competitiveness by providing real theoretical and practical problem-solving socio-economic development. It is necessary to change the ordinary way of thinking and bring economic and hygienic calculations to substantiate their financial recommendations. Currently there are only a few calculations of certain types of health damage and completely separate and disparate issues of damage calculation only for the effect of chemical contamination. So now the task is to sum up these separate calculations into the integral method of determining the damage from all types of contamination, including biological, and its compensation on the level of territories, entities and physical persons.

A specific tool may be the development of information and expert system used in determining payments for environmental pollution, developed at the Sumy State University. The system consists of an integrative overview on the location electronic map of all components of the environment and all kinds of human capital and the result of their interaction as to the types of activities and costs. A multi-dimensional integrative topological map which includes layer by layer of ecological and geographic characteristics of the area with the representation of all main objects, polluting the environment, with the help of colors and their intensity is created on the screen. The state of population and workers health (illness) is reflected as a separate layer or integrally with the ecological and economic components. It also shows the level of ecological and economic damages caused by a variety of natural and anthropogenic factors, and possible or necessary expenditures to achieve maximum well-being, or any particular result. The maps can be accessed by all levels of government authorities or interested parties. We have worked through this system in the areas of oil production in the Sumy region. The problem is that the immediate need for energy causes the usage of small deposits in poor areas with developed agriculture in and fertile soil, which exacerbates the problem of economic and environmental security. The second side of the issue is social and environmental problems of contamination of the rural population habitat, exacerbated by the existing problem of pollution of land and water by animal waste, i.e. co-chemical and biological contamination. But for economic and social mainstream of this problematic situation we are lacking quantitative estimates of the hazards (risks) of population infection in these areas.