ACTA SOCIETATIS MATHEMATICAE LATVIENSIS Abstracts of the 5th Latvian Mathematical Conference, April 6–7, 2004, Daugavpils, Latvia © 2004 LMB

USE OF INDICES FOR CHARACTERIZATION OF SOCIAL AND ECONOMIC PROCESSES

JANIS VUCANS

Ventspils University College and University of Latvia Inženieru iela 101, LV-3601, Ventspils, Latvia E-mail: janisvu@venta.lv

"Latvia has become again the market economy the market economy consolidation continues in Baltics the economic tiger jump of Baltic Countries at the beginning of the 21st century ..." such or similar expressions we have red in newspapers, heard from the politicians in TV or radio broadcasts. In few cases such expressions are analyzed by qualified scientists - representatives of social and economic sciences.

But what are the methods to validate the statements of mentioned above type about the social and economic processes in the world or in some country? One of the possible ways to analyze such processes, with the aim to determine the qualitative changes by using the quantitative methods, is to elaborate the mathematical models, characterizing corresponding processes completely or separately - for some their parts. In this sense also the indices that have been elaborated for assessment of corresponding processes have been considered as mathematical models.

Situation becomes more complicated, when the explainable process as itself has some degree of abstraction. For example, comparing for some countries or regions the economic, social or some other developments, peoples use to speak about the *economic freedom, socially well-disposed society, ecologically clear environment*, etc. All of these concepts are in some sense "blurry", non-precise. In majority of cases they have not exact definitions, but have only clarifying descriptions - most usually made by describing the corresponding functions.

At the same time we have red or heard, that Hong-Kong and Singapore for a number of years are proclaimed as the citadels of economic freedom. Specialists in related fields know that this statement has been "proved" by calculations based on different defined *indices of economic freedom*. Some of these calculations show also, that the all three Baltic Countries in the sense of economic freedom have penetrated into the list of leading thirty world economies, but Estonia already is the sixth most free economic in the world (lagging only from the two mentioned countries of Eastern Asia, as well as from New Zealand, Luxemburg and Ireland, but in front of UK, Denmark, USA, Australia, Sweden and other countries [1]).

How valid are such statements? To what extent are such statements scientific and correct? Maybe, sometimes such statements and corresponding "proofs" are only the long-term marketing tricks? Maybe, sometimes researchers, analyzing problems of mentioned type, are forced to come to the conclusions that have the type of *sophism*?

I appeal mathematicians of Latvia to think about the mentioned or similar to them questions a little during the 5th Latvian Mathematical Conference and very seriously every time when they give advices to representatives of other fields.

REFERENCES

^[1] Marc A. Miles, Ph.D., Edwin J. Feulner, Jr., Mary Anastasia O'Grady, and Ana I. Eiras. 2004 Index of Economic Freedom. The Heritage Foundation and The Wall Street Journal, 2004.