

## **SKILLS IN EVIDENCE-BASED DECISION-MAKING FOR ECONOMICS, INNOVATION AND HEALTH CARE MANAGEMENT**

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In nowadays conditions of innovative economy it is required of graduates to have creative and rapid professional evidence-based decision-making, often in the face of uncertainty. The graduate should possess information technologies, which include search, acquisition, analysis and synthesis of information and processing methods. One of the most important issues of the day in the field of business education is high demands on the skills in the field of information and economic mathematical software for managing business processes.

A significant problem for many graduates in Economics, Management, Innovation is the use of mathematical models, mathematical and statistical methods and formalized evidence in the preparation and evaluation of management decisions. This problem exists partly due to Soviet traditions of training of economists. For example, in the beginning of 1990s in Moscow State University there had been two specialist fields in the economics – “Political economy”, which mainly targeted ideological training, and “Economic Cybernetics”, in which the emphasis was placed on the mathematical modeling of economic systems, which led to the emergence of economists who either didn’t use mathematical tools on the proper level or poorly understood the essence of economic processes. Currently, seniors executives in the field of health-care are formed mostly from specialists with

medical degree who possesses leadership skills in management of a medical team but who to a lesser degree are familiar with the scientific-based methods of substantiation of administrative decisions. The problems of necessity and the possibility of using formal methods in the analysis of socio-economic processes and systems in predicting the consequences of management decisions were reviewed and considered by many domestic and foreign researchers [1; 2; 3; 4; 5]. There are numerous works attempting to generalize approaches to the creation of methodical software for the teaching of quantitative methods of economic analysis using computer-assisted learning. The concept of “evidence-based economics” has been developing recently. It is economy that uses the principle of evidence at every level of decision-making – from public policy to the program of development of the elements of society.

It is necessary to strike a balance between economic and mathematical disciplines in the curriculum, as well as to determine the requirements for the content of these mathematical disciplines. This task is complicated by a number of reasons.

Firstly, the lack of cross functional specialists who would know both mathematical methods, mathematical and statistical tools, economic theories and models, as well as possessed the skills of using modern software products for evidence-based study of social and economic decisions.

Second, the lack of interest among students and graduate students to use mathematical and statistical models and evidence during the socioeconomic research, due, to a large extent, to the low level of mathematical training, which is associated with an a priori representation of the economy as a purely humanitarian discipline. This in turn leads to a decrease in the quality of performance of students theses and scientific postgraduate studies.

For the first time in the university practice has been developed an academic subject of “evidence-based economy”. Contents of this subject cover a range of issues related to the expansion and deepening of theoretical knowledge about the qualitative features of economic and social systems and the laws of their development. The subject aims at mastering the methodology and methods of construction, analysis and application of mathematical and mathematical-statistical models for analyzing the state and the prospects for the development of socio-economic systems; to impart skills of processing a massive statistical information using new information technologies.

The subject is based on the analogy with the now generally accepted concept of evidence-based medicine, the appearance of which in 1990 was due to the growing need for critical evaluation of medical information in order to establish its reliability and validity and as well as on the concepts of “evidence-based economics”, “evidence-based management”, “evidence-based

industrial and organizational psychology”. The concept of the subject “evidence-based economy” is a natural reaction to the necessity of such an approach and potential implementation of such an approach to economic theory and practice, in which decisions are made on the basis of the available evidence of their effectiveness, and such evidence is subjected to search, comparison, generalization and wide dissemination for use in the interests of society.

The purpose of the introduction of the subject “evidence-based economy” in the educational process is creation of conditions for effective teaching undergraduate and graduate students the methodology and methods of construction and application of system’s analysis, mathematico-statistical models and formalized evidence to evaluate the status and prospects of development of socio-economic processes and systems of macro- meso and micro levels.

The goals of implementation of the subject are as follows:

- increasing the motivation of students to the use of mathematical and statistical models and formalized evidence in the preparation of analyzes to evaluate the measures in the field of socio-economic policy and strategic decision-making at the micro, meso and macro levels to predict the main socio-economic indicators of the organization, industry, the region and the economy as a whole;
- creating conditions for the introduction of innovative learning technologies in training of students;
- improving the execution quality of scientific papers and dissertation research;
- creating conditions for increasing quality of scientific and pedagogical executives’s work

The scientific and methodological materials for the new educational subject on discipline “evidence-based economy” is developed and includes the work program and thematic plan for the subject. The materials are presented in three sections: the fundamentals of evidence-based microeconomics, the fundamentals of evidence-based macroeconomics, the fundamentals of evidence-based mesoeconomics. The materials are designed for practical and laboratory studies involving the use of modern computer-assisted learning and data processing software. Each section contains examples of common tasks performed by using real economic and statistical data as well as tasks for self studies. Scientific and methodical materials of the “evidence-based mesoeconomics” should be used as training cases for specialists in the field of health organizations. The results of extracurricular activities on the subject “Fundamentals of evidence-based economy” confirms the appropriateness of including it in the training of the scientific teaching executives in graduate schools.

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## АССОЦИАЦИЯ БИЗНЕС-ОБРАЗОВАНИЯ, ПРОБЛЕМЫ И ПУТИ РАЗВИТИЯ

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Развитие национальной системы бизнес-образования становится важнейшей задачей государства, решение которой направлено на повышение конкурентоспособности белорусской экономики, обеспечение сферы бизнеса квалифицированными управленческими кадрами, способными в рыночных условиях успешно решать любые экономические задачи.

Переход экономики на инновационный путь развития, модернизация производства, возросшая конкуренция в бизнес-среде обозначили дефицит компетентных специалистов по управлению инновационными предприятиями и сформировали устойчивый спрос на подготовку, повышение навыков и компетенций бизнес-управленцев.