

ABSTRACT

The thesis is presented in 63 pages. It contains 2 appendixes and bibliography of 22 references. Fifteen figures and 6 tables are given in the thesis.

Topic relevance. In today's business realities, the business legal entity, as an open system, operates in a complex, volatile and dynamic environment. Therefore, the topics related to ensuring the state of economic safety are relevant. Most enterprises have already introduced a corresponding post, which is responsible for tracking economic threats and maintaining the status of a stable business activity. However, the using of an appropriate subsystem or module for assessing economic safety in an already existing automated system will allow systematically and more precisely track the threat, eliminate the human factor and allow to make management decisions in accordance with indicators. Nowadays, ERP systems do not use direct automated methods for assessing economic safety, therefore, the development of the appropriate module for this type of systems is relevant.

Thesis connection to scientific programs, plans, and topics. The thesis was prepared according to the scientific research plan of the Applied Mathematics Department of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute."

Research goal and objectives. The goal of this thesis is to develop the separate module for assessing the state of economic safety of the enterprise in the ERP system.

To accomplish this goal, the following objectives were reached:

- to explore the concept of "economic safety"
- to identify the main levers of the impact of economic safety within ERP systems;
- to identify the main functionalities of the module for assessing the state of economic safety and to develop methods for their solution;
- develop a conceptual model for assessing the state of economic safety for the ERP system;
- realize the received conceptual model of the estimation the state of economic safety to the ERP system of the enterprise as a separate module.

Object of research are methods, methodologies, models and algorithms for assessing the risks of economic safety, the main economic characteristics of the ERP system of the enterprise to assess the state of economic security of the entity, the theoretical content of the concept "Economic safety" and related terms and key indicators of economic safety of the enterprise.

Subject of research is conceptual model and software of the module of estimation the economic safety state of enterprise ERP system on the basis of methods of optimization, statistical methods and methods of risk assessment.

Methods of research. To solve the task, the following methods were used: methods of optimization, statistical methods and methods of risk assessment.

Scientific contribution consists of the following:

- for the first time the task of using methods for assessing the state of economic safety of an enterprise for existing automated systems is posed;
- for the first time, the integration of a conceptual model for assessing the state of economic safety to the ERP-system of the enterprise is proposed.

Practical value of obtained results. It is proposed to create a separate module for assessing the state of economic safety of the enterprise within the ERP system, using standard modules, to improve the quality of management, increase the efficiency of economic activity and prevent losses.

Approbation of the thesis results. Basic ideas and results of the research were presented at PMK-2018.

Publications. Thesis results are published in 1 scientific works:

in 1 papers in proceedings of scientific conference.

Keywords: economic safety, levers impact, ERP-system, Dynamics 365, assessment of the economic safety state.