ABSTRACT

The thesis is presented in 69 pages. It contains 3 appendixes and bibliography of 17 references. 20 figures are given in the thesis.

The goal of the thesis is to develop mathematical and software tools for analysis of corruption risks in public e-procurement system Prozorro.

The work compares existing procurement systems and software for their analysis. The comparison was carried out in terms of the purpose and results of the analysis, functionality and additional capabilities. To solve the problem, fuzzy data analysis has been selected.

Each property of the procurement that is used for analysis was described by fuzzy linguistic variables for which the membership functions were constructed. Rules for fuzzy inference and composition of output data are created. The software that implements the chosen method is developed. The system was tested and supplemented with the ability to flexibly configure the rules.

Keywords: procurement, corruption, Prozorro, fuzzy logic, expert system, linguistic variable, production rules.