

Abstract of the Article
“Multimodal State Space Investment Project Presentation”
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To investigate the stability of the enterprise investment project a two type system combination has been proposed. It should be done through consistent description of stability and state space variables (belonging to the internal system). Description of state space variables involves mapping system relations between variables. They characterize the behavior of a system, and they are selected according to the first approach and record of the first order differential equations of each state space variable, that allows to get rid of the most important disadvantages of the first approach.

To investigate the stability of the investment project it has been considered as signed graphs, based on the internal system description. The relation between state space variables, structural components of a project scheme and the vertices of the graph have been defined in the article.

The use of signed graphs has been demonstrated to describe the enterprise investment project, its structural components and their interconnections. The value stability and disturbances system are considered in connection with the graph perturbation process. The stable and top – resistant value under perturbation process conditions were determined. The matrix of a graph interconnection has been built and the criteria have been defined to determine the stability of the whole system.

A mechanism establishing the correspondence of the company’s investment project described in the form of signed graphs to the internal state space system has been provided. The differential equation of the first order system describing each state space variable has been presented.

The directions improving the combination of internal and external models and signed graphs description and the combination of total assessment and stability models have been investigated.