Poster Session

Sustainable Development Strategies of University with System Dynamics Approach

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In this study, an online questionnaire was prepared and the components of universities' sustainable development were sent to the experts (related professors and staff working in the field of university green management) of Iran's top universities for scoring. The components of "reducing energy consumption and using clean energy" with a score of 4.56, "active participation in sustainable local and national development" with a score of 4.41, and "attracting the support of senior managers, faculty and staff for more success in the green management of the university "with a score of 4.38 out of 5, they were ranked first to third, respectively. Then to obtain the interaction between the basic parameters of universities' sustainable development, namely society, economics, environment, university governance, and academic research; A systems dynamics model was developed. In the model, the clustering method was used according to the comprehensiveness of the topic of sustainable development. To model and relate the clusters to each other, all five clusters were linked to strategic variables (sustainability, campus, and university strategy) with equations. Then the strategic variables were related to the rate variable (green management) with equation writing, and finally, the stock variable, ie universities' sustainable development, was obtained using changes in the rate variable. By performing different scenarios on the system dynamics model, reliability was obtained. Intra-cluster, inter-cluster, and trans-cluster evaluations were performed and it was concluded that the effect of components on strategic variables, rate variables, and stock variables were not the same and for example, by applying a coefficient of 0.5 on The first-order component is the effect of its change on the rate variable twice as much as its effect on the accumulation variable. It should be noted that universities' sustainable development depends on the practice of all aspects of environmental, social and economic, governance and research, and can not be achieved only by acting on the desired components.