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Mathematics in Konya, Land of Tolerance

Data envelopment analysis and efficiency analysis of higher education institutions: Example of Selçuk University

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ABSTRACT

The Ministry of National Education and the Council of Higher Education are authorized and responsible for studies on improving the educational quality of higher education institutions in our country, implementation of educational activities, balanced distribution of higher education services throughout the country, to take measures to ensure equality of opportunities and opportunities for candidates to access to higher education through effective and efficient use. The fact that universities are decision-makers, have independent legal entities, and act independently in decision-making and implementation; lack of a foresight mechanism for the decisions to be taken, with the usefulness of the actions taken, and the appropriateness of the decisions taken; act independently in decision-making raises the problem of lack of knowledge of the activities of universities and units. In this study, it was tried to determine how effective and efficient they work with input (number of academic staff, number of administrative staff, number of students, amount of appropriation, etc.) and output (number of graduates, expenditure amount, academic incentive points, etc.) values used by Selçuk University affiliated faculties and four year college. It is important to inform senior management about the current situation and to create insight in decisions to be taken under variable factors for the future. In this study, Selçuk University 2018 Administration Annual Report and 2018 Academic Incentive Score data were used. In this study, data envelopment analysis, which is a parameterless technique which uses linear programming principles, is used to perform relative efficiency analysis in order to enable comparison with each other. As a result of the study, relative efficiency analysis of the units were performed and evaluations were made regarding the ways in which the input and output values

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were not effective and the ways to be effective. If it is effective, in order to maintain the current level of activity, if the idle (unutilized capacity) capacity arose, the assessments regarding the idle capacity were made.

Key Words: Activity Measurement, Universities, Data Envelopment Analysis, Linear Programming

MCS: 61, 65, 68

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