

MEASURING THE PERFORMANCE OF MALAYSIAN UNIVERSITIES USING CHARNES, COOPER AND RHODES (CCR) AND SLACK-BASED MEASURE (SBM) MODELS

(Pengukuran Kecekapan Universiti di Malaysia Menggunakan Model Charnes, Cooper dan Rhodes dan Model Ukuran Bersandarkan Sleak)

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ABSTRACT

The efficiency and productivity of the higher education sector play an important role in the development and growth of a nation, both as a major source of human capital and the main driver of the country's economic growth. Public higher education is under tremendous pressure worldwide to improve its performance and quality. This paper examines the efficiency scores of 20 public universities in Malaysia using the Charnes, Cooper, and Rhodes model (CCR) and Slack-Based Measure model (SBM). Three inputs and five outputs are determined to measure the performance of the university through the graduate student's marketability. The findings show that out of 20 public universities, 11 public universities are efficient with an efficiency score equal to 1. Meanwhile, the remaining nine public universities showed inefficient score results. Suggestions and improvements are identified to improve the efficiency of those universities in the future. To overcome the inefficient universities, the use of the SBM model provides recommendations to consider in measuring efficiencies which are number of postgraduate students enrolled, number of undergraduate students enrolled, and number of academic staff as the inputs and number of postgraduates, number of undergraduates, number of graduates working, number of graduates who choose to further studies and number of graduates choose to develop skills as the outputs. All the criterias need to consider for the improvement for the universities to be more efficient.

Keywords: Charnes, Cooper and Rhodes model; efficiency; Slack-Based Measure model

ABSTRAK

Kecekapan dan produktiviti sektor pendidikan tinggi memainkan peranan penting dalam pembangunan dan pertumbuhan sesebuah negara sebagai model insan dan pemacu utama dalam pertumbuhan ekonomi negara. Pendidikan tinggi awam berada pada tahap tekanan yang luar biasa di seluruh dunia untuk meningkatkan prestasi dan kualitinya. Kajian ini mengkaji skor kecekapan 20 universiti awam di Malaysia menggunakan model Charnes, Cooper dan Rhodes (CCR) dan juga model Ukuran Bersandarkan Sleak (SBM). Terdapat tiga input dan lima output yang ditentukan untuk mengukur prestasi universiti melalui kebolehpasaran siswazah. Daripada 20 universiti awam, sebelas universiti awam adalah cekap dengan memberi nilai skor kecekapan adalah sama dengan 1. Sementara itu, sembilan universiti awam yang selebihnya memberi keputusan nilai skor tidak cekap. Cadangan dan penambahbaikan dibuat untuk memastikan bahawa universiti yang tidak cekap akan efisien pada masa akan datang. Untuk mengatasi ketidakcekapan universiti, penggunaan model SBM dapat memberikan cadangan yang perlu dipertimbangkan dalam mengukur kecekapan iaitu bilangan pelajar pascasiswazah mendaftar, bilangan pelajar prasiswazah mendaftar dan bilangan staf akademik sebagai input dan seterusnya bilangan pascasiswazah, bilangan mahasiswa, bilangan graduan yang bekerja, bilangan graduan memilih untuk melanjutkan pelajaran dan bilangan graduan yang memilih untuk membangunkan kemaharian sebagai output. Kesemua kriteria ini perlu dipertimbangkan untuk proses penambahbaikan agar universiti menjadi lebih cekap.

Kata kunci: model Charnes, Cooper dan Rhodes; kecekapan; model Ukuran Bersandarkan Sleak

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