Lecture Notes in Operations Research

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Advances in the Theory and Applications of Performance Measurement and Management

Proceedings of DEA45—International Conference on Data Envelopment Analysis

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ISSN 2731-040X ISSN 2731-0418 (electronic)
Lecture Notes in Operations Research
ISBN 978-3-031-61596-2 ISBN 978-3-031-61597-9 (eBook)
https://doi.org/10.1007/978-3-031-61597-9

Using DEA to Identify Hispanic Serving Institutions for Best Practices in Increasing STEM Degrees Awarded to Hispanics

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Abstract Sponsored by the National Science Foundation, this article showcases the findings of a two-year study using Data Envelopment Analysis (DEA) with data from the Integrated Postsecondary Education Data System (IPEDS) at the National Center for Education Statistics, to effectively measure the efficiency of Hispanic Serving Institutions (HSIs) graduating Hispanics with STEM degrees. The guiding research question was: *On what input measures do we select efficient HSIs to serve other HSI institutions as possible benchmarks for program improvement in graduating Hispanics with STEM degrees*? An outcome of this work is a framework for investigating and organizing best practices at HSIs for increasing Hispanics earning STEM degrees. The project notably advances knowledge within the field of HSI research. Of the HSI studies published between 1978 and 2021, none used DEA and therefore, the proposed project has the potential to sprout a new branch of HSI research. The proposed project also has the potential to broadly impact desired American societal outcomes. Scientific literacy is one of the benefits from earning a STEM degree. Increasing Hispanics graduating with STEM degrees will here too, result in more voices that can purposefully engage in informed public discourse on science and technology policy, and especially on issues relevant to the Hispanic community.

Keywords Hispanic serving institutions · STEM degrees · Best practices

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A. Emrouznejad et al. (eds.), *Advances in the Theory and Applications of Performance Measurement and Management*, Lecture Notes in Operations Research,
https://doi.org/10.1007/978-3-031-61597-9_22

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