Performance evaluation of healthcare: A pilot case study

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Due to healthcare in Turkey encounters new improvements each day Turkey's expenses on healthcare rose by 23.6% year-by-year. This refers to $8.5 billion in 2017. The highest share of expenses which was declared as $4.3 billion and public health services followed at about $2.4 billion. This amount exceeds the initial annual government budget of $8.3 billion for healthcare. This paper aims to measure the performance of a pilot hospital in Turkey by using the combination of Data Envelopment Analysis (DEA) and the Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS). This paper demonstrates the utilization of the proposed methodology to solve the real life problem of healthcare management, DEA–TOPSIS methodology provides an opportunity to make the most suitable decision thought the value of the weights calculated by the data. The combination of DEA and TOPSIS method is utilized to determine and compare the efficiency of hospital units of the pilot hospital. The 16 units of the pilot hospital have been analysed based on a set of inputs and outputs of the proposed model.

Biography: Babak Daneshvar Rouyendegh is an Assoc. Prof. Dr. of Industrial Engineering Department, of Ankara Yıldırım Beyazıt University (AYBU). His work has been published in high-impact journals such as, Human Factors and Ergonomics in Manufacturing & Service Industries, International Journal of Production Research, Journal of Testing and Evaluation, and Annals of Operations Research, Computer Applications in Engineering Education, Information Systems Journal among others. He is serving as the Editor of the Journal of Turkish Operations Management. His main teaching and research interests include performance measurement, fuzzy set, linear programming and multi-criteria decision-making.

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