عنوان مقاله:

Measuring the Efficiency of Financial Cloud Services in the Banking Industry Using the Modified Dynamic DEA with Network Structure: The Case of Iran E-Banking.

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خلاصه مقاله:

Nowadays, the great benefits of cloud computing have dramatically increased the number of e-banking users. Hence, the competition in the banking industry has boosted and managers need to evaluate their branches on a regular basis. To this end, this study aims to evaluate cloud-based banking systems based on the Quality of Service (QoS) attributes using the Dynamic Network Data Envelopment Analysis (DNDEA) model. The main advantage of this research is that the efficiency of cloud-based bank branches can be estimated more realistically according to their internal structure over a specific time span. To conduct the experiment, ۴۰ bank branches in Iran are analyzed by considering between-period and divisional interactions during ۲۰۱۸-۲۰۱۹. A cloud-based bank branch is conceptualized as a set of three inter-connected divisions including capabilities, intermediate process, and profitabilities. Some outputs of sub-DMUs ۲ and ۳ are treated as desirable and undesirable carry-overs between consecutive periods. In addition, the cost items and QoS attributes are considered as the inputs and outputs of divisions, respectively. The results indicate that ۲۸ bank branches were efficient and all of the inefficiencies fall in divisions ۱ and ۳. Moreover, the number of efficient branches has been reduced from ۲۰۱۸ to ۲۰۱۹.

کلمات کلیدی:

Data envelopment analysis, Banking industry, Financial Cloud Computing, Dynamic Network model, QoS Attributes

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