# Efficiency of Gulf Cooperation Council banks: empirical evidence using data envelopment analysis


ABSTRACT

Purpose: This paper aims to investigate the efficiency level of Gulf Cooperation Council (GCC) banks on technical efficiency (TE), pure technical efficiency (PTE) and scale efficiency (SE). Both PTE and SE represent the potential factors that influence the efficiency of the GCC banks. In total, 43 GCC banks were observed in this study over the period from 2007 until 2011. Design/methodology/approach: The Data Envelopment Analysis, a non-parametric method using variable returns to scale under Banker, Charnes and Cooper model, was used with assets and deposit (as input) and loan and income (as output). Findings: On average, the results show that many GCC banks are operating within an optimal scale of efficiency. Nevertheless, the results also show managerial inefficiency in the use of resources. Furthermore, the results indicate that, while the larger banks (the 22 largest) tend to operate at constant returns to scale (CRS) or decreasing returns to scale, the smaller banks (the 21 smallest) are susceptible to operate at either CRS or increasing returns to scale. Research limitations/implications: Because of the chosen research method, the results may lack generalisation. Therefore, researchers are encouraged to test the propositions further. An additional implication of the results is that it was able to identify some banks that may become potential targets for outside acquisition. Practical implications: The findings should be useful to banks in the GCC in increasing their efficiencies and recognizing those with a potential for outside acquisition. Originality/value: The findings are valuable because they will facilitate the maintenance of efficient banks in the GCC. This is necessary to enable the countries to maintain a healthy and sustainable economy.



**Keyword:** GCC banks; Scale efficiency; Technical efficiency; Pure technical efficiency