

## **Profitability and Prudence in Practice: Measuring Efficiency in Saudi Islamic and Conventional Banks using DEA and Tobit Regression**

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**Abstract:** This study evaluates the efficiency of Islamic and conventional banks in Saudi Arabia from 2017–2024 using a two-stage DEA–Tobit framework. DEA results show that conventional banks consistently outperform Islamic banks in technical and scale efficiency, while Islamic banks achieve perfect managerial efficiency under variable returns to scale. Tobit findings reveal that capital adequacy significantly enhances efficiency in Islamic banks, whereas profitability exerts a negative effect. For conventional banks, profitability remains insignificant. Overall, the results underscore the central role of scale optimisation and prudential strength in shaping efficiency outcomes within Saudi Arabia’s dual banking system.

**Keywords:** Efficiency Score, Total Assets, Return on Assets, Capital Adequacy Ratio, Non-Performing Assets, Total Deposit, Operating Expense, Fixed Assets, Islamic Banking, Conventional Banking, DEA, Regression

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