

## **Productive Performance Evaluation of the Banking Sector in India Using Data Envelopment Analysis**

**Biresh K. Sahoo<sup>1,\*</sup>, Jati K. Sengupta<sup>2</sup>, and Anandadeep Mandal<sup>3</sup>**

<sup>1</sup>Amrita School of Business, Amrita Vishwa Vidyapeetham, Ettimadai Post, Coimbatore 641 105, India

<sup>2</sup>Department of Economics and Operations Research, University of California, Santa Barbara, CA 93106, USA

<sup>3</sup>Industrial Development Bank of India (IDBI), Kochi-35, India

*Received April 2006; Revised October 2006; Accepted October 2006*

---

**Abstract**—This paper attempts to examine, using data envelopment analysis, the productivity performance trends of the Indian commercial banks for the period: 1997-98 – 2004-05. Our broad empirical findings are indicative in many ways. First, the increasing average annual trends in technical efficiency for all ownership groups indicate an affirmative gesture about the effect of the reform process on the performance of the Indian banking sector. Second, the higher cost efficiency accrual of private banks over nationalized banks indicate that nationalized banks, though old, do not reflect their learning experience in their cost minimizing behavior due to X-inefficiency factors arising from government ownership. This finding also highlights the possible stronger disciplining role played by the capital market indicating a strong link between market for corporate control and efficiency of private enterprise assumed by property right hypothesis. And, finally, concerning the scale elasticity behavior, the technology and market-based results differ significantly supporting the empirical distinction between returns to scale and economies of scale, often used interchangeably in the literature.

**Keywords**—Banks, Efficiency, Scale elasticity, Data envelopment analysis

---

---

\* Corresponding author's email: s\_bires@ettimadai.amrita.edu