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Pure Technical Efficiency and Scale Efficiency of Commercial Banks of Sri Lanka: An output oriented-BCC model of DEAT.Selvamalai Thiraviam¹

Using data envelopment analysis (DEA), the paper measures the pure technical efficiency (PTE) and scale efficiency (SE) of commercial banks in Sri Lanka between 2001 and 2014. The study mainly used an output-oriented Banker, Charnes and Cooper's model (BCC model) of basic DEA to measure the efficiency score of commercial banks. The BCC model is named after its developers Banker, Charnes and Cooper (1984), and is based on the assumption of variable return-to-scale. In BCC, overall technical efficiency (OTE) measure has been decomposed by pure technical efficiency (PTE) and scale efficiency (SE). The PTE measure has been used as an index to capture managerial process. The SE provides the ability of management to choose the optimum size of resources. The data was gathered from various Annual Reports of Central Bank of Sri Lanka. For the analysis, the study used one output variable (profits before taxation) and three inputs variables (investment, loans and advances, and total liabilities) between 2001 and 2014. The study founds several results. In the study periods, the commercial banks of Sri Lanka have performed well in 2010 and 2012 because of the scores of both pure technical efficiency (PTE) and scale efficiency (SE) were equal to one only in 2010 and 2012. Further, the lowest pure technical efficiency score was 0.84 in 2009 while the lowest scale efficiency score was 0.40 in 2001.

Key words: *Commercial Banks, Pure technical efficiency, Scale efficiency, Data envelopment analysis*

¹ Faculty of Economics, South Asian University, New Delhi, India, selvam3088@gmail.com