

Operating Efficiency of Life Insurance Companies: An Assurance Region Model

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The present paper compares thirteen life insurance companies in respect of technical efficiency for the period 2002-2003 to 2005-2006 using the assurance region approach. The assurance region approach was introduced by Thompson, Singleton, Thrall and Smith (1986) and was further developed by Thompson, Langemeier, Lee, Lee and Thrall (1990). This approach avoids the problem of slacks by imposing restrictions on the shadow prices of inputs and/or outputs. This leads to a reconstruction of the isoquant in a manner such that no slacks can exist at the radial projection of any input/output bundle onto the modified isoquant.

Year to year comparison of mean technical efficiency scores reveal that mean technical efficiency has improved in 2003-2004 relative to 2002-2003, remained on the same level in 2004-2005 and declined in 2005-2006. This is likely because of divergence in the performance across the life insurers. In the last two years, most of the life insurers have exhibited increasing returns to scale. This is indicative of the wide opportunities that the insurers have in store for them.

Introduction

Following the deregulation of the life insurance sector in India in end-1999, private sector life insurance companies have made steady progress in terms of business growth. In view of the same it is of interest to make an enquiry about the operating performance of these companies *vis-a-vis* the Life Insurance Corporation of India which had monopoly control over the Indian life insurance sector for 44 years. The present paper seeks to do the same for the period 2002-2003 to 2005-2006 using non-radial data envelopment analysis.

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