ABSTRACT

An economy is built upon financial intermediation. The efficacy of financial intermediation ripples through distant economic boundaries and benefits all the stakeholders. Insurance has emerged as one of the significant constituents of the Indian financial intermediation; thus, the question of its efficiency should not be lost sight of. Time and again, the Indian insurance industry was found at crossroads. Each time, whenever structural changes took place, the insurance industry got transmuted. The latest structural change took place in 2000 when the Insurance Regulatory and Development Authority (IRDA) Act, 1999 was enacted. It marked the ending of state exclusivity and the beginning of market-driven competition in the Indian insurance sector. Then policymakers believed that the liberalisation-led competition would persuade both the public insurer and private insurers to perform efficiently and to grab higher shares of the uninsured market. They prophesied that the reform would bring a positive impact on key insurance parameters.

The potential insurance market of India appeals for unabated scale expansion. However, scale expansion policy should be subject to scale efficiency analysis. The present study primarily focuses on the measurement of scale efficiency scores of the life insurance companies operating in India during the post-reform period. This study measures and analyses scope efficiency also. The scale efficiency relates to the volume of production and the scope efficiency relates to the variety in production.

The efficiency aspect of the Indian insurance industry has not been researched as substantially as compared to foreign insurance industries. The Econometric Frontier Approach (EFA) and the Data Envelopment Approach (DEA) are popular techniques in the realm of efficiency studies. The present study chooses the EFA over the DEA. In the Indian context, the econometric path of the efficiency measurement is almost not travelled. The study undertakes

the Ordinary Least Square (OLS) method of estimation to measure the scale efficiency of the life insurance companies operating in India during the period from 2003-04 to 2018-19. It measures the scope efficiency of the entire industry, as well as the public sector and the private sector individually. It adopts the translog cost function. Separate output sets are adopted to measure the scale efficiency and the scope efficiency. Benefits paid (Q_R) is one of the output variables to measure scale efficiency. The other output variable is investment (policyholders') and income from investment along with assets held to cover linked liabilities (Q_I). Three output variables, namely, life fund (Q_1), pension and group fund (Q_2) and ULIP fund (Q_3) are adopted for the measurement of scope efficiency. Three input variables are chosen, namely, labour (L), capital (K) and technical provision (TP). Cost (C) is the single dependent variable. Operating expenses related to the insurance business along with payment to suppliers of labour, capital and technical provision is used to surrogate the cost. Labour (L) is priced with commission per agent (W). Insofar as the price of shareholders' fund (R) and that of technical provision (P) are concerned, income from investments per rupee of shareholders' fund and prime lending rate are adopted respectively.

It is found that the reform has caused a structural break in the life insurance premium series. It has driven the average premium upward. However, the slope, i.e., growth rate per year, has reduced by 5.9 per cent. Around 73 per cent of life insurance companies enjoy scale economies throughout the study period. No life insurance company is scale-neutral, i.e., scale efficiency equals unity. Two life insurance companies, namely, TATA-AIA Life Insurance Company Limited (TALIC) and Shriram Life Insurance Company Limited (SHLICL), experience scale diseconomies. Around 18 per cent of life insurance companies experience both scale economies and scale diseconomies during the study period. Insofar as the entire life insurance industry is concerned, scale economies prevail. The public life insurance sector enjoys scale economies, whereas the private life insurance sector experiences scale

diseconomies, except in two financial years. Hence, the entire life insurance industry should expand its scale of production, and such expansion should be contributed by the public sector. The yearly scale efficiency scores of the entire life insurance industry stay in between the public and the private life insurance sector except in the financial year 2009-10. It is due to the combined impact of scale economies and scale diseconomies as prevailed in the public sector and the private sector respectively. It is also found that with the increase in asset size and with the expansion of scale (output), the value of scale economies, though remaining less than unity, increases. Insofar as the scope efficiency is concerned, this empirical study indicates that a higher cost is involved in specialised production than in joint production. In other words, joint production is better as dropping any two of three outputs would lead to higher costs. Hence, the entire life insurance industry, as also individually the public life insurance sector and the private life insurance sector, are scope efficient, as they are currently pursuing joint production.