INDIAN INSTITUTE OF MANAGEMENT INDORE



An Efficiency Based Investigation into the Comparative Firm Performances within Indian Life Insurance Industry, with Special Reference to State Ownership

A thesis submitted in partial fulfilment of the requirements of the Fellow

Programme in Management (Industry) at the Indian Institute of Management

Indore

Submitted By:

Arun Kumar Giri FPM (Industry) 2012

Thesis Advisory Committee:

Prof. Shubhabrata Basu [Chairman]

Prof. Prashant Salwan [Member]

Prof. Vinaysingh J. Chawan [Member]

LIST OF ABBREVIATIONS:-

AUM: Asset Under Management

BCC: Banker-Charnes- Cooper

CCR: Charnes-Cooper-Rhodes

CRS: Constant Return To Scale

Opex – Operating Expenses

Comex: Commission Expenses

DEA: Data Envelopment Analysis

DMU: Decision Making Units

JV: Joint Venture

IJV: International Joint Ventures

ROA: Return On Assets

ROE: Return On Equity

ROC: Return On Capital Employed

SOE: State Owned Enterprises

PSU: Public Sector Undertaking

SFA: Stochastic Frontier Analysis

SE: Scale Efficiency

Super-SBM-Non Oriented: Super-efficiency model without orientation

 $TE: Technical\ Efficiency$

VRS: Variable Return to Scale

INDEX

| SR. | SUBJECTS | PAGE |
|------|---|------|
| NO | | NO |
| | | |
| | | |
| | A DOWD A CYT | |
| | ABSTRACT | 7 |
| | | |
| 1.0 | INTRODUCTION | 9 |
| | | |
| 2.0 | THEORY BUILDING AND RESEARCH GAP | 12 |
| | | |
| 3.0 | EFFICIENCY AND PRODUCTIVITY OF FIRMS | 24 |
| 0.0 | | - ' |
| | | |
| 4.0 | RESEARCH GAP & RESEARCH QUESTIONS | 29 |
| | | |
| 5.0 | RESEARCH METHOD | 32 |
| | | |
| 6.0 | DATA COLLECTION & ANALYSIS | 42 |
| 0.0 | DATA COLLECTION & MALIOIS | 72 |
| | | |
| 7.0 | RESULTS | 63 |
| | | |
| | | 40 |
| 8.0 | ANALYSIS OF RESULTS AND FINDINGS | 68 |
| | | |
| 9.0 | LIMITATION OF CURRENT STUDY AND FUTURE WORK | 75 |
| 7.0 | EMMITTATION OF GORDEN STODE MAD FOR TOTAL WORLD | 13 |
| | | |
| | | |
| 10.0 | MANAGERIAL IMPLICATION AND CONCLUSION | 77 |
| | | |
| 11.0 | REFERENCES | 78 |
| 11.0 | REPERENCES | 7.6 |
| | | |
| 12.0 | APPENDIX | 91 |
| | | |
| | | |

| TABLE NO | LIST OF TABLE AND CONTENT | PAGE NO |
|-------------------|--|----------------|
| T-1 | Dimensions of Sectoral Deregulation and Economic Liberalization | 14 |
| T-2 | Year Wise Market Share of Life Insurance Corporation of India(LIC) | 36 |
| T-3 | Ownership (Equity Capital) Structure of Life Insurance Companies Operating in India as on 2016-17 | 37 |
| T-4 | Characteristics of Radial and Non-Radial Models | 44 |
| T-5 | Category & Cluster or Model of DEA | 45 |
| T-6 to T-19 | Consolidated Data Commission -Expense, Operating Expense & Equity and Premium Income, Benefit, Investment Income & Asset Under Management) of Indian Life Insurance Companies – Uses in the Analysis | 47 to 60 |
| T-20 | (2003- 2016) Input-Output data all the Life Insurance Companies for the year 2016-17 | 61 |
| T-21 | Efficiency Score based on BCC-Input Oriented DEA Model | 63 |
| T-22 | Efficiency Score based on BCC-Output Oriented DEA Model | 64 |
| T-23 | Super Efficiency Score based on Slacked Based Model - Super Efficiency SBM – V –(Variable Return to Scale) | 65 |
| T-24 | Super Efficiency Score based on Slacked Based Model - Super Efficiency SBM – C –(Constant Return to Scale) | 66 |
| T-25 | Agent Productivity - Average Number of Insurance Policies Sold by Individual and Corporate Agents of all the Life Insurance Companies. | 70 |
| T-26 | Distribution of Office of Life Insurers as on March 31, 2016 | 71 |
| T-27 | Ratio of Commission Expense/Premium &Operating Expenses /Premium | 72 |
| T-28 | Individual Death Claims of Insurers in 2015-16 | 72 |
| | | |

ABSTRACT

Research on the Indian State Owned Enterprises (SOE) have followed two broad trends. The

first trend adopted the failure analysis approach, documenting the causes for the losses and ill

health of SOEs. The second trend adopted the success factor approach, whereby well performing

SOEs were selectively sampled and case studies were undertaken to narrow down on a set of

probable success parameters. However both the above approaches have their limitation; the

failure analysis approach did not result in formulation and implementation of successful and

sustained turn around strategies. The identification of success factors were often followed by

SOEs entering extended periods of losses.

In the present study, I adopted the cause of success approach as the point of departure. I intend

to study the Indian SOE in the Life Insurance Sector namely LIC of India. The choice of LIC is

guided by two conditions. First LIC despite operating under competitive environment, continues

to control around 70% of the market share since sectoral deregulation in 2001. This is eminently

interesting as theory posits suboptimal performance outcomes for SOEs, operating in non-

discontinuous environment with low negative externalities. Therefore LIC must have done

something that defies the received wisdom. Secondly, an in depth analysis of the firm, using

efficiency measures, shall provide us insights into the source(s) of success and potential threats

to those success.

To achieve the above research objectives, I adopted, optimization based data envelopment

analysis (DEA) to identify the efficiency frontiers, with respect to identified parameters within

the industry. I supplemented DEA, with slack based super-efficient analysis to determine the

robustness of my findings. Amongst other factors, I found that, against the existing trends, LIC's

superior efficiency and performance is partly attributable to their archaic brick and mortar

extensive agency network as opposed to more online network preferred by private industry

incumbents.

Keywords: Indian SOE, Insurance Sector, Super Slack Based DEA, LIC of India