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中小产险公司效率评价及优化路径分析——基于 DEA和SFA的综合模型

An Analysis on Efficiency Evaluation and Optimization of Small and Mid-sized Property Insurance Companies——Based on an Integrated DEA-SFA Model

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摘　要

我国的财产保险行业是一个集中度相当高的行业：七家大型财产保险公司占据80%的市场份额，其总资产和净资产占总比分别为70%和60%，其体量与其他中小产险公司之间差别巨大。基于此，本文创新性地将中小产险公司作为一个整体样本进行效率研究，在研究方法上，本文采取了数据包络分析（DEA）和随机前沿分析（SFA）结合的综合模型，对中小产险公司的经营效率进行了评价和分析，并基于分析结果提出了相关提升中小产险公司效率的建议。

本文首先结合国内外文献，对企业效率研究理论和当前的研究现状进行了陈述，并对一些重要的理论和模型进行了较为细致的总结。然后对当前我国财产保险业的经营现状进行了分析，得出了我国财产保险业高度集中的结论；并基于市场份额和资产规模，划分出了本文的研究主体——中小产险公司。

本文将保费收入、投资收益作为产出变量，将员工人数、资本金、营业费用、手续费及佣金支出作为投入变量，采用DEA-SFA-DEA模型对主体进行了效率研究。在SFA阶段，将市场份额、成立年限作为环境变量进行了剔除，得出了调整后的效率结果。

在效率评价上，本文的主要结论为：中小产险公司的纯技术效率（PTE）较为接近，技术效率（TE）主要受规模效率（SE）的影响；外资产险公司较于中资中小产险公司更能有效地利用环境因素。

最后，本文基于前述的实证结果提出了包括优化营销方式，提升投资水平以及推进中小产险公司并购重组在内的三条优化经营效率的政策建议。

中小产险公司；DEA；SFA

Abstract

China's property insurance industry is highly concentrated, with the seven largest companies accounting for 80% of total market share, and 70% and 60%of total and net assets, respectively, varying significantly from other small and mid-sized players. Under this background, this thesis creatively conducts an efficiency analysis on small and mid-sized property insurance companies as a whole using an integrated model combining Data Envelopment Analysis (DEA) with Stochastic Frontier Analysis (SFA) and makes suggestions on efficiency improvement to small and midsized property insurance companies.

Based on relevant domestic and foreign literature, the thesis first presents theories of enterprise efficiency study and current research developments and makes detail summaries of the key theories and models. Then the conclusion of China's property insurance industry being highly concentrated is drawn from an analysis on the industry's status quo, also the research subject-small and mid-sized property insurance companies-of this study is identified based on market share and assets size.

Treating premium income and investment income as output variables and staff number, capital fund, operation expense, service charge and commission as input variables, this thesis conducts an efficiency analysis on small and mid-sized property insurance companies using a DEA-SFA-DEA model. At the SFA stage, an adjusted result is obtained by removing environment variables including market share and time of establishment.

The thesis concludes that small and mid-sized property insurance companies exhibit similar Pure Technical Efficiency (PTE) and Technical Efficiency (TE) is highly correlated to Scale Efficiency (SE); also fore-funded companies are more able to take advantage of environment factors than their Chinese counterparts. Lastly, this thesis brings forward three suggestions on improving efficiency

including optimizing the marketing tactics, improving investment portfolio management and promoting mergers and acquisitions.

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