

Title : A Model for Forecasting the Growth of the Life Insurance Business.
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Year of Publication : 2006 **Publisher** : Dhurakijpundit University
Sources : Dhurakijpundit University Research Center
Number of Pages : 190 Pages **Copyright** : Dhurakijpundit University

Abstract

The purpose of this research was in order to study factors that affect to the Total Direct Premium and construct the proper forecasting models of the growth of life insurance business. Under this work, data are yearly collected during 1989-2004 and data analysis used forecasting techniques and statistical theory consisted of Multiple Linear Regression, Principle Component Regression, Exponential Smoothing and Dummy variables for segmented models.

So as to select the proper models from such techniques were compared by using the Mean Absolute Percentage Error (MAPE). According to all forecasting techniques considered in this research, Multiple Linear Regression technique is proper method for total direct premium model that given the minimal of mean absolute percentage error as following:

$$\hat{Y}_t = 411,118.39 + 0.925 \text{Re_Ordinary} + 1.043 \text{St_Ordinary} + 0.277 \text{Re_Industrial} \\ + 1.061 \text{St_Industrail} + 5279.348 \sqrt{\text{St_Group}} + 2.959 \text{Re_Group}$$