



The University of Chicago
Department of Statistics

MASTER'S THESIS PRESENTATION

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**Model Selection Criteria with the Data Analysis on
Korean Life Insurance Market**

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ABSTRACT

For many situations, choosing the best model among given candidate models is a problem of primary importance. In fact, for the best predictive model, it needs to be determined through various method of model selection criterion, since there is no concurrence on the best method for finite sample estimation problems. In this paper, I will introduce four approaches of choosing the best model from many candidate models. Two classical methods, Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC), will be introduced first and then Structural Risk Minimization (SRM), which is the model selection criterion developed within the Statistical Learning Theory (SLT). The last method is new cross validation model selection criterion, also known as the predictive divergence criterion (PDC). The latter part of this paper consists of data analysis related to Korea life insurance market. I have tried to find what factors make influence on the life insurance sales volume in South Korea. Then, collected number of whole insurance sales volume from 1990 to 2010 in order to implement four model selection methods mentioned above.

Information about building access for persons with disabilities may be obtained in advance by calling Sandra Romero at 773.702-0541 or by email (sandra@galton.uchicago.edu).