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EVALUATION OF PERFORMANCE OF MODEL SELECTION METHODS IN BINARY LOGISTIC REGRESSION

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KEY WORDS (at least 5 words)

- ✓ binary logistic regression
- ✓ model selection methods
- ✓ performance measurements
- ✓ statistical modelling
- ✓ simulation

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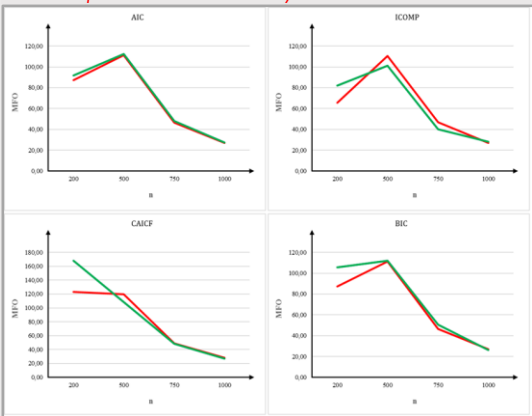


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THESIS ABSTRACT

A hypothetical population was created by generating a simulation with $N=1000000$. One thousand repetitions were made separately for the forward, backward, and stepwise methods, with different sample sizes, and logistic regression models were created and compared with the AIC, BIC, ICOMP, CAICF information criteria and accuracy criteria of the population model. When model selection methods were compared in our study, backward and stepwise methods generally gave better results in continuous variable weighted models. When the weights of variable types are similar, the forward selection method gives better results than other model selection methods.

APPLICATION AREAS OF THE THESIS RESULTS

Thesis results will be suitable for use in the fields of statistics and biostatistics.

Comparing, evaluating and investigating different situations from the applied simulation scenarios, model performance criteria and sample sizes will be a reference and guide for future studies.

ACADEMIC ACTIVITIES

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