The purpose of this research is to compare methods of parameters estimation in multiple linear regression when some observations of dependent variable are type I right censored.The methods of parameters estimation under consideration in this study are Smith Method, Maximum Likelihood Estimation Method and Modified Acturial Method. Data used in this study are generated through The Monte Carlo simulation technique with 800 repetitions. Sample data are normal distribution of size 10,20,30,50 and 100 with censoring proportion 0.1,0.2,0.3,0.4 and 0.5 respectively. Comparing methods of parameters estimation,the square root of mean square error of estimating the response variable (RMSE) has been used.

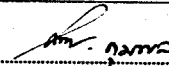The results of this research can be concluded as follows:

The RMSE of Smith Method is lowest when censoring proportion are 0.1,0.2 and 0.3 under all sample size and independent variable except sample size are 10 ,independent variable is 5 and censoring proportion is 0.1 ,the RMSE of Modified Acturial Method is lowest;independent variable is 7 and censoring proportion are 0.2 and 0.3 the RMSE of Maximum Likelihood Estimation method is lowest. When censoring proportion are 0.4 and 0.5 the RMSE of Maximum Likelihood Estimation method is lowest under all sample sizes and independent variables.

The factor that vary inversely with RMSE is sample size,on the other hand, censoring proportions vary directly with RMSE.

ภาควิชา........สถิติ.................................... ลายมือชื่อนิสิต.....................................

สาขาวิชา........สถิติ.................................... ลายมือชื่ออาจารย์ที่ปรึกษา.......................

ปีการศึกษา.......2539................................ ลายมือชื่ออาจารย์ที่ปรึกษาร่วม.................