Final Assignment: Predicting Director Compensation

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Introduction

Dependent variable:

Compensation

(1)

(2)

4.991

4.820

Constant

(4.936, 5.047)

(4.730, 4.908)

.065

.056

Male

(-.085, .218)

(-.092, .202)

.008

.010

Age

(0.000, .017)

(.002, .019)

.226

SectorBasic Materials

(.082, .370)

.294

SectorServices

(.172, .415)

DIC

508

488

Par.

4

6

Observations

336

336

R2

.018

.083

Residual Std. Error

.515

.499

Note:

p<0.1; ***p<0.05;*** p<0.01

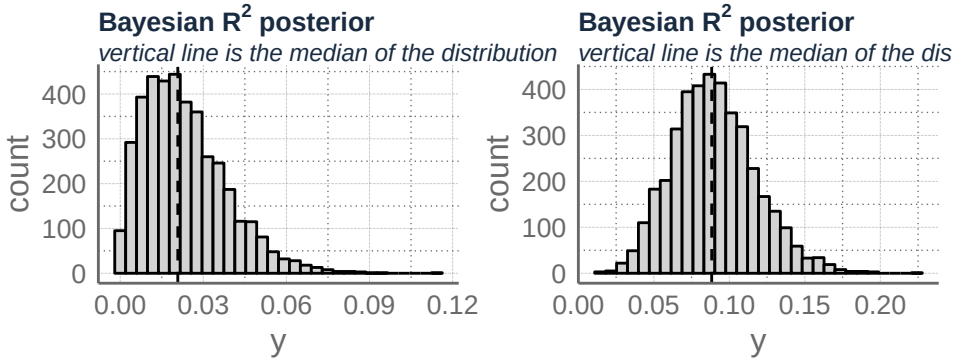

Figure 1: Bayesian R-squared value for model 1 (left) and model 2 (right).

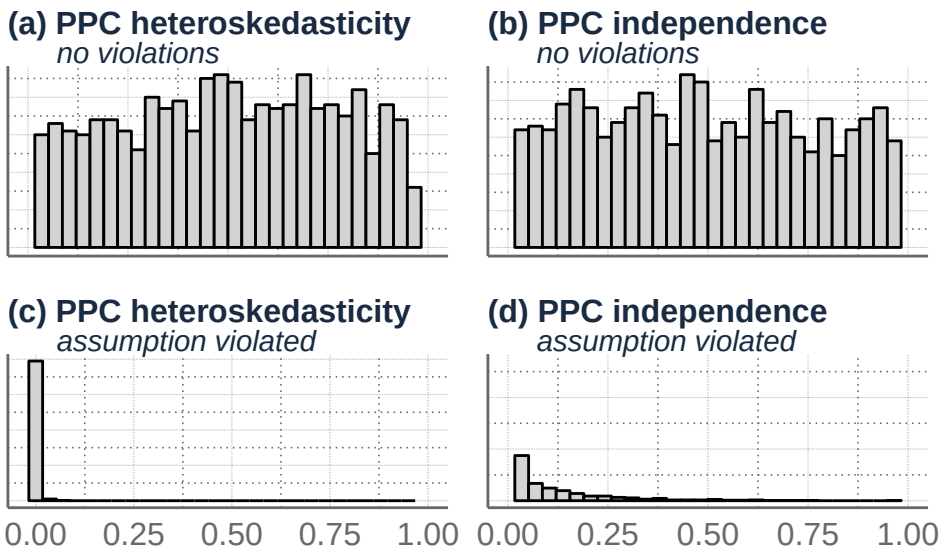

Figure 2: Distributions of posterior predictive p-values for 1.000 simulated data sets. In plots (a) and (b), the simulated data are drawn from a normal without any violations of the linear regression assumptions. In plot (c), the assumption of homoskedasticity is violated in each of the simulations. In plot (d), the assumption of independence of errors is violated in each of the simulations. The data are drawn using the function generate_data() in the blm library.