Perspective of Computational Modelling

Problem Set #1

Due Monday, Jan. 9 at 11:30 am

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Problem 1

1. Source of the statistical model: American Journal of Sociology.
2. David Jacobs and Jonathan C. Dirlam, "Politics and Economic Stratification: Power Resources and Income Inequality in the United States," *American Journal of Sociology* 122, no. 2 (September 2016): 469-500.

http://www.journals.uchicago.edu/doi/abs/10.1086/687744

1. This journal article tests the power resource hypothesis with a pooled time-series analysis of income inequality. The statistical model is:
2. Exogenous variables are: .

Endogenous variables are: income inequality in the U.S. States from 1978 to 2011. It is measured with the natural log of the Theil inequality measure computed on Internal Revenue Service income data.

1. The model is a dynamic, linear and stochastic model.
2. What I think the model is missing that might be valuable:

Problem 2

(a)

Dependent variable: how long popular musicians live (in years)

Independent variables: age, gender, education, working hours, location, marriage, type of music

Equation:

(b) [must predicted lifespan ( in years) of a particular musician]

(c)

(d) working hours

(e) demographic characteristics are necessary, others are what I think would influence how long the popular musicians live. (may need citation?)

(f) The steps I would take to do the preliminary test:

1. Gathering data from Internet

2. Data cleaning in statistics software

3. The relationships should be linear. Run the linear regression model in statistics software and get the results