

Survey of experts on the predictive validity of ordinary least squares multiple regression models

Expected accuracy of out-of-sample forecasts from models estimated from non-experimental empirical data using alternative methods relative to those from 99 originating diverse published models

- For each of the eight forecasting methods described in the form below, please indicate whether you would expect out-of-sample¹ forecasts to be *less, equally, or more* accurate² than the equivalent forecasts from published ordinary least squares multiple regression analysis models from diverse domains³.

1: "Out-of-sample" here means n forecasts from models estimated using $n-1$ observations of observed values of the causal variables.

2: As measured by Unscaled Mean Bounded Relative Absolute Error or UMBRAE (Chen, Twycross, & Garibaldi 2017)

<https://doi.org/10.1371/journal.pone.0174202>

$$UMBRAE = \frac{MBRAE}{1-MBRAE} \text{ where } MBRAE = \frac{1}{n} \sum_{i=1}^n \frac{|e_i|}{|e_i|+|e_i^*|}$$

3: Data as published in association with the models, but causal variable observations standardised to facilitate the estimation of alternative methods to OLS regression. Models published in textbooks and academic papers on problems such as predicting life expectancy, election results, house prices, race records, crime rates, house selling prices, salary rates, blood pressure, and fertility rates.

- Provide support for your rankings in the form of the best reference to relevant experimental evidence if you are aware of any or indicate "experience" or "judgment" otherwise.

- Return completed questionnaire to kesten.green@unisa.edu.au.

Method	Accuracy of forecasts relative to those from the originating published OLS regression models (check one \times)			Support (reference to experimental evidence, experience, or "judgment")
	Less	Equal	More	
Ordinary least squares multiple regression analysis models adjusted by equalizing the coefficients to equality				
Plausible naïve models for each originating model's situation, e.g., $n-1$ sample average				
Ordinary least squares multiple regression analysis models' forecasts "damped" by averaging with the corresponding naïve models' forecasts				
Multiple least absolute deviation (median regression) models with the same form and variables as the published models				
Simple regression analysis models using the "best" causal variable, where "best" is the variable with the strongest relationship with the forecast variable (largest coefficient) in the ordinary least squares multiple regression model				
Simple regression analysis models using the "best" causal variable, where "best" is the variable with the highest bivariate correlation with the forecast variable				
Average of forecasts from simple ordinary least squares regression models of all variables used in the published model				
Ordinary least squares multiple regression analysis models adjusted by equalizing the coefficients halfway toward equality				

Number of forecasting related papers published (approx.):	
Number of non-forecasting econometric papers published (approx.):	
Number of forecasting reports prepared (approx.):	
Number of non-forecasting econometric reports prepared (approx.):	