ECONOMETRIC MODELS ROBUST ESTIMATION PRACTICAL ASPECTS.

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Despite the big amount of foreign and domestic econometric models robust estimation publications [1-3 and others], the ordinary least squares (OLS) method is continued to be used by researchers even in cases, when Gauss–Markov theorem preconditions fulfillment applying is doubtful. Such status is generated by lack of attention to econometric models robust estimation practical realization methods by modern computers means. Concentration of majority university's econometric courses on classical mathematical statistics methods, based on the sample average quantity conditional expectation estimation, also contributes essentially to mentioned problem existence.

Based on mentioned above, econometric models robust estimation practical aspects research, in particular with median method, is important scientific-applied and methodical task.

In this work interchangeability methodology of "line"-function, which accomplish OLS, and "medfit"-function, which accomplish median method in Mathcad, is proposed [4]. The algorithm of choosing and using of one or another Mathcad function can be as follows:

1. correlation diagram building and visual ascertainment whether the sample has homoscedasticity property and also outlers existence is determining;
2. using of "line"-function in case of homoscedasticial sample without outlers, or using of "medfit"-function in opposite case;
3. in equivocal case both models can be built and compared by mian aproximation error, forecasting value and other competing models comparison criteria;
4. to conduct model estimation sensitivity analysis, for example by means of little changing of parameters;
5. to estimate the forecasting value of both models;
6. to estimate how the model fits to economical theory principles.

The proposed algorithm is approximate and can be changed depending on input statistic data samples size, model specified purpose etc.

Nonlinear econometric models parameters robust estimation practical approaches working out is the closest most important research direction in this field.

References:

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