This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: Annals of Economic and Social Measurement, Volume 3, number 1

Volume Author/Editor: Sanford V. Berg, editor

Volume Publisher: NBER

Volume URL: http://www.nber.org/books/aesm74-1

Publication Date: 1974

Chapter Title: NBER Computer Research Center Notes

Chapter Author: NBER

Chapter URL: http://www.nber.org/chapters/c10014

Chapter pages in book: (p. 295 - 295)

NBER COMPUTER RESEARCH CENTER NOTES

The NBER Computer Research Center for Economics and Management Science has been engaged, since its formation in 1971, in developing new software systems for quantitative social science research. Prototype systems for exploratory data analysis, mathematical programming, and econometrics are now in various stages of design and implementation. Notes on research in progress, as well as abstracts of working papers, are a regular feature in the Annals. Following are abstracts of recent papers by Ray C. Fair and David C. Hoaglin, research associates of the Center's econometrics and data analysis projects, respectively. The full text of each paper is available in limited quantity, at $1.00 per copy, from the NBER Computer Research Center, 575 Technology Square, Cambridge, Massachusetts 02139 (Attention: Support Staff).

Fair, Ray C. (Princeton University and NBER Computer Research Center), **"A Comparison of FIML and Robust Estimates of a Nonlinear Macroeconomic Model"**, NBER Working Paper No. 15 (October 1973), 26 pp.

The prediction accuracies of six estimators of econometric models are compared. Two of the estimators are ordinary least squares (OLS) and full-information maximum likelihood (FIML). The other four estimators are robust in the sense that they give less weight to large residuals. One of the four estimators is approximately equivalent to the least-absolute-residual (LAR) estimator; one is a combination of OLS for small residuals and LAR for large residuals; one is an estimator proposed by John H. Tukey; and one is a combination of FIML and LAR. All of the estimators account for first-order serial correlation of the error terms. The main conclusion is that robust estimators appear quite promising for the estimation of econometric models. Of the four robust estimators considered, the LAR-like estimator performed the best. The FIML and FIML-LAR estimators also appear promising.

Hoaglin, David C. (Harvard University and NBER Computer Research Center), **"Monte Carlo Techniques in Studying Robust Estimators"**, NBER Working Paper No. 16 (November 1973), 16 pp.

Recent work on robust estimation has led to many procedures which are easy to formulate and straightforward to program but difficult to study analytically. In such circumstances experimental sampling is quite attractive, but the variety and complexity of both estimators and sampling situations make effective Monte Carlo techniques essential. This discussion examines problems, techniques, and results and draws on examples in studies of robust location and robust regression.

December 17, 1973