

ABSTRACT

The Multicollinearity Problem in Econometrics

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This study examines the multicollinearity problem in Econometrics. The contention is that the multicollinearity problem remains unresolved to a large extent, but substantial progress has been made in dealing with certain aspects of it. The condition number can serve as a good measure of certain consequences of collinearity, but finding an overall measure of the degree of collinearity remains unresolved; on the other hand, much progress has been made in determining the pattern of collinearity. These aspects are considered in Chapter 2. The results in Chapter 3 provide further evidence that some of the Stein rule and ridge type estimators can give very large reductions in risk when compared to the maximum likelihood estimator. It is shown in Chapter 4 that large reductions in variances can be obtained from use of some Stein rule and ridge type estimators. The area in which the least progress has been made is that of statistical inference and interval estimation; this is addressed in Chapter 5.