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Universal admissibility of linear estimators in multivariate linear models with respect to a restricted parameter set. (Chinese. English summary) Zbl 0995.62003

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Summary: We give some characteristics of universal admissibility for linear estimators of regression coefficients under the multivariate linear models $(Y, X\Theta, V \otimes \Sigma)$ and the matrix loss function $(D(Y) - S\Theta)'(D(Y) - S\Theta)$, where the parameters Θ and Σ vary in the restricted class $H_N = \{(\Theta, \Sigma) : \Theta'X'NX\Theta \leq \Sigma, N \geq 0\}$. Our results establish the relationships between the linear admissible estimators of $S\Theta$ under the multivariate linear model $(Y, X\Theta, V \otimes \Sigma)$ and the linear admissible estimators of $S\beta$ under the Gauss-Markov model $(Y, X\beta, \sigma^2V)$ and extend some results in the literature.

MSC:

[62C15](#) Admissibility in statistical decision theory

[62H12](#) Estimation in multivariate analysis

[62F30](#) Parametric inference under constraints

[62J05](#) Linear regression; mixed models

Cited in **2** Documents

Keywords:

[universal admissibility](#); [linear estimators](#)