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On equalities of estimations of parametric functions under a general linear model and its restricted models. (English) [Zbl 1197.62020](#)

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Summary: Estimations of parametric functions under a general linear model and its restricted models involve some complicated operations of matrices and their generalized inverses. In the past several years, a powerful tool, the matrix rank method was utilized to manipulate various complicated matrix expressions that involve generalized inverses of matrices. We use this method to derive necessary and sufficient conditions for six equalities of the ordinary least-squares estimators and the best linear unbiased estimators of parametric functions to equal under a general linear model and its corresponding restricted model.

MSC:

[62F10](#) Point estimation
[62J05](#) Linear regression; mixed models
[15A09](#) Theory of matrix inversion and generalized inverses
[62F30](#) Parametric inference under constraints

Cited in **15** Documents

Keywords:

[restricted linear model](#); [OLSE](#); [BLUE](#); [parametric functions](#); [estimability](#); [equality of estimations](#)

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