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Articles

Collinearity diagnostic applied in ridge estimation through the variance inflation factor

Roman Salmerón Gómez, José García Pérez, María Del Mar López Martín & Catalina García García

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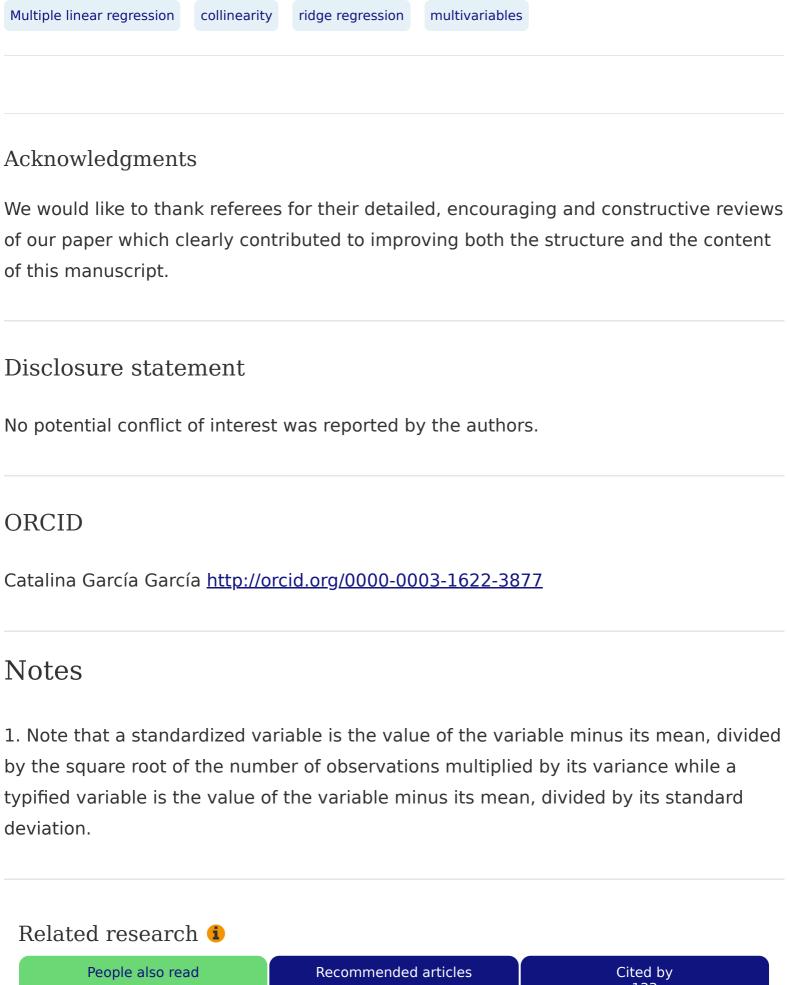
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ABSTRACT

The variance inflation factor (VIF) is used to detect the presence of linear relationships between two or more independent variables (i.e. collinearity) in the multiple linear regression model. However, the traditionally used VIF definitions encounter some problems when extended to the case of the ridge estimation (RE). This paper presents an extension of the VIF in RE by providing two alternative VIF expressions that overcome these problems in the general case. Some characteristics of these expressions are also presented and compared with the traditional expression. The results are illustrated with an economic example in the case of three independent variables and with a Monte Carlo simulation for the general case.

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