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The corrected VIF (CVIF)

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Abstract

In this paper, we propose a new corrected variance inflation factor (VIF) measure to evaluate the impact of the correlation among the explanatory variables in the variance of the ordinary least squares estimators. We show that the real impact on variance can be overestimated by the traditional VIF when the explanatory variables contain no redundant information about the dependent variable and a corrected version of this multicollinearity indicator becomes necessary.

Keywords:

corrected VIF | near-multicollinearity

JEL classification :

C13 | C52

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Notes

When increases, assuming that , , TSS and TSS_j remain constant, R^2 also increases.

The overall coefficient of determination, when all the explanatory variables are included in the model, is bigger than the sum of the coefficients of determination resulting from individual regressions between y and each one of the explanatory variables.

Thus, we also agree that 10 times higher is a substantial increase in the estimated variance of OLS estimators.

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