Tests for multiple changes in trending regression

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Abstract

We consider F type tests for detection of structural changes in trending regression. Approximations to the corresponding critical values can be obtained through the limit distribution of the test statistic under the null hypothesis. However, its explicit form is generally unknown and is a functional of Gaussian processes. We show via simulations that bootstrap methods without replacement provide satisfactory approximations to the critical values.

References

[1] Bai J. and Perron P. (1998) *Estimating and testing linear models with multiple structural changes.* Econometrica **66**, 47 – 78.

[2] Hušková M. and Picek J. (2005) *Bootstrap in detection of changes in linear regression.* Sankhyā: The Indian Journal of Statistics, Vol. 67, 200 –226