Tests for principal eigenvalues and eigenvectors

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Abstract: We establish CLTs for the principal eigenvalues and eigenvectors under a large factor model setting. As an application, we develop two-sample tests for both the principal eigenvalues and principal eigenvectors, which can be used to detect structural breaks in large factor models. While there exist such tests, they can not distinguish between individual eigenvalues and/or eigenvectors. Our tests provide unique insights into the source of structural breaks.

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