University of Duisburg-Essen
Faculty of Business Administration and Economics
Chair of Econometrics

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Multivariate Time Series Analysis

Solution Exercise Sheet 4

1 Exercise 1: Information Criteria

Prove Corollary 4.5 from Slide 4-7.

Solution:

From Theorem 4.4:

$$C(l) = \log\left(\hat{\Sigma}_a(l)\right) + \frac{l}{T} \cdot c_T$$

i) $\lim_{T\to\infty} c_T \longrightarrow \infty$

ii) $\lim_{T\to\infty} \frac{c_T}{T} \longrightarrow 0$