

Separate and Combined Estimates in Time Series

Rong Jea and Jin-Shieh Su*

*Department of Applied Mathematics Chinese Culture University

Abstract

In sample surveys, it is usual to make use of auxiliary information to increase the precision of estimators. The information on the auxiliary variable is use to estimate the population mean using the ratio and regression methods of estimation. The separate estimate has a smaller variance than the combined estimate in stratified random sampling. Several studies have noted that the aggregate effect on model structure, parameter estimation, forecasting, and various time series test. This study considers the problem of separate and combined estimates in time series. The work concludes with an empirical illustration.

Keywords: ratio estimate, regression estimate, time series

個別與聯合估計在時間數列上的應用

賈容、蘇金石*

*中國文化大學應用數學系

摘要

在抽樣調查中，經常使用比率估計與迴歸估計當作輔助變數，以提供更多的訊息增加其估計式的精確度。在分層隨機抽樣裡可以證明個別迴歸估計與比率估計有較小的變異數，表示個別估計較聯合估計精確。過去已有許多研究針對時間數列資料整合的效果探討其模式結構、參數估計、預測和相關的檢定。本研究將分層抽樣中的個別與聯合估計的概念應用在時間數列分析上，比較其效果並以實證資料加以驗證。

關鍵詞：比率估計、迴歸估計、時間數列