



統計科學研究所

INSTITUTE OF
STATISTICAL SCIENCE



統計所學術演講



中研院統計所

Seminar

Title : Spurious Precision in Meta-Analysis

Speaker : Prof. Heiko Rachinger

(Department of Applied Economics at Universitat
de les Illes Balears)

Time : 10:30 ~ 12:00, Tuesday, January 30, 2024

Place : Auditorium, B1F, Institute of Statistical Science

Abstract

Meta-analysis upweights studies reporting lower standard errors and hence more precision. But in empirical practice, notably in observational research, precision is not given to the researcher. Precision must be estimated, and thus can be p-hacked to achieve statistical significance. Simulations show that a modest dose of spurious precision creates a formidable problem for inverse-variance weighting and bias-correction methods based on the funnel plot. Selection models fail to solve the problem, and the simple mean can beat sophisticated estimators. Cures to publication bias may become worse than the disease. We introduce an approach that surmounts spuriousness: the Meta-Analysis Instrumental Variable Estimator (MAIVE), which employs inverse sample size as an instrument for reported variance.

※ Tea reception starts at 10 : 10.

※ Lecture in English. Online live streaming through Cisco Webex will be available.