

# Inference in Partially Identified Heteroskedastic Simultaneous Equations Models<sup>1</sup>

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## Abstract

Identification through heteroskedasticity in heteroskedastic simultaneous equations models (HSEMs) is considered. The possibility that heteroskedasticity identifies structural parameters only partially is explicitly allowed for. The asymptotic properties of the identified parameters are derived. Moreover, tests for identification through heteroskedasticity are developed and their asymptotic distributions are provided. Monte Carlo simulations are used to explore the small sample properties of the asymptotically valid methods. Finally, the approach is applied to investigate the relation between the extent of economic openness and inflation.

JEL code: C30

Key words: Heteroskedasticity, simultaneous equations models, testing for identification, Davies' problem

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