EMPIRICAL LIKELIHOOD-BASED TESTS
FOR STOCHASTIC DOMINANCE OF
ANY PRE-SPECIFIED ORDER

Abstract
Among many types of orders of varying degrees of strength for comparing distributions, stochastic
dominance is one of the weakest and has long been used in the comparison of income, wealth, and
earnings distributions. For example, in finance, stochastic dominance criteria can potentially provide an
unambiguous ranking of the desirability of different assets while placing only general restrictions on the
preferences of investors. Recently, El Barmi and McKeague (2013) developed an empirical likelihood
ratio test for stochastic dominance of first order. We consider tests that relate to general forms of
stochastic dominance. Such tests, in the case of tests for stochastic dominance beyond first order, do
not have a closed form but retain the appealing properties of the empirical likelihood method. We first
consider the one-sample problem and then extend the approach to the general k-sample setting. The
asymptotic null distributions of the tests are obtained and inferential procedures based on resampling are
proposed and justified. We conduct simulation studies to compare the tests to alternative approaches.
An empirical example is also provided to illustrate its practical utilities.

on

Monday, March 30, 2015

(Refreshments will be served from 3:15 p.m. outside Room 301 Run Run Shaw Building)

3:30 p.m. – 4:30 p.m.

at

Room 301, Run Run Shaw Building

Visitors Please Note that the University has limited parking space. If you are
driving please call the Department at 3917 2466 for parking arrangement.

All interested are welcome