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ON THE SECOND ORDER PROPERTIES OF EMPIRICAL LIKELIHOOD WITH MOMENT RESTRICTIONS

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ABSTRACT

This paper considers the second order properties of empirical likelihood for a parameter defined by moment restrictions, which is the framework operated upon by the Generalized Method of Moments. It is shown that the empirical likelihood defined for this general framework still admits the delicate second order property of Bartlett correction, which represents a substantial extension of all the established cases of Bartlett correction for the empirical likelihood. An empirical Bartlett correction is proposed, which is shown to work effectively in improving the coverage accuracy of confidence regions for the parameter.