Mathematics > Statistics Theory

Local Identification of Nonparametric and Semiparametric Models

Xiaohong Chen, Victor Chernozhukov, Sokbae Lee, Whitney K. Newey

(Submitted on 16 May 2011 (v1), last revised 24 Sep 2012 (this version, v2))

In parametric models a sufficient condition for local identification is that the vector of moment conditions is differentiable at the true parameter with full rank derivative matrix. We show that additional conditions are often needed in nonlinear, nonparametric models to avoid nonlinearities overwhelming linear effects. We give restrictions on a neighborhood of the true value that are sufficient for local identification. We apply these results to obtain new, primitive identification conditions in several important models, including nonseparable quantile instrumental variable (IV) models, single-index IV models, and semiparametric consumption-based asset pricing models.

Subjects:	**Statistics Theory (math.ST)**; Methodology (stat.ME)
MSC classes:	62G99, 62P20
Cite as:	**arXiv:1105.3007 [math.ST]**
	(or **arXiv:1105.3007v2 [math.ST]** for this version)

Submission history

From: Sokbae Lee [view email]
[v1] Mon, 16 May 2011 06:18:00 GMT (27kb)
[v2] Mon, 24 Sep 2012 16:36:41 GMT (39kb)

Which authors of this paper are endorsers?