

Accepted Manuscript

Ridge estimation in semiparametric linear measurement error models

Hadi Emami

PII: S0024-3795(18)30210-6
DOI: <https://doi.org/10.1016/j.laa.2018.04.016>
Reference: LAA 14556

To appear in: *Linear Algebra and its Applications*

Received date: 2 August 2016
Accepted date: 12 April 2018

Please cite this article in press as: H. Emami, Ridge estimation in semiparametric linear measurement error models, *Linear Algebra Appl.* (2018), <https://doi.org/10.1016/j.laa.2018.04.016>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Ridge estimation in semiparametric linear measurement error models

Hadi Emami

Department of statistics, University of Zanjan, Zanjan, Iran

Abstract

We consider the ridge and restricted ridge estimation in semiparametric linear models when the covariates are measured with errors and the covariance matrix of the parameters is ill conditioned. The estimators are compared and the dominance conditions as well as the regions of optimality of the proposed estimators are determined based on quadratic risks. A simulation studies are conducted to illustrate the finite sample performance of the proposed procedures.

Keywords: Ill -conditioned, Measurement error, Ridge regression estimators, Semiparametric regression.

MSC :

2010 MSC: 15 A04, 15A18, 62J07, 62G07

1. Introduction

Collinearity is troublesome and the effects of its presence on different aspects of linear models is well known (see for instance, [Belsley \(1991\)](#)). When there is collinearity among the explanatory variables alternative estimators has been proposed which are generally biased. Among them ridge estimators have received a great deal of attention in statistical literature since the

Email address: h.emami@znu.ac.ir (Hadi Emami)

Download English Version:

<https://daneshyari.com/en/article/8897798>

Download Persian Version:

<https://daneshyari.com/article/8897798>

[Daneshyari.com](https://daneshyari.com)