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CORRECTION

RANK REGRESSION

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Peter Bickel has pointed out an error in the proof of the claim in Lemma 5 that the estimating equation (7) has a unique solution when $\varphi(t) = t$. The incorrect assertion is that $\sum \bar{z}_i(z_i - \bar{z}_i) = 0$. The same error occurs when considering the multivariate case in Remark (v) on page 1388. I am unable to substantiate the claim of uniqueness. However, dominated convergence can be used to show $n^{-1}l(b) \to E[Z(F_b^{-1}(F_{b_0}(b_0 Z + \varepsilon)) - bZ)]$ in probability and this has a negative derivative with respect to b. Thus under conditions which guarantee that $n^{-1}l(b)$ has two uniformly bounded derivatives [equivalently $\bar{Z}(b)$ has one uniformly bounded derivative], a unique solution will exist asymptotically for b on any compact interval containing b_0. The proof of the existence of a solution for any $n \geq 2$ (in the scalar case) is still valid. If multiple solutions do occur for finite n, then the one which minimizes $\sum(\bar{t}_i^b - bz_i)^2$ should be taken as the estimate and it will have the asymptotic properties stated in Theorem 1.

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