Econometric Theory, **8**, 1992, 421–422. Printed in the United States of America.

ERRATUM

Bruce E. Hansen, Strong Laws for Dependent Heterogeneous Processes. *Econometric Theory* 7(1992): 213–221.

There were some errors made in [2]. The results of Section 2 are stated to hold for L^r-mixingales, $r > 1$. They hold, however, only for $r \geq 2$. The proof of Lemma 1 on page 219 uses Minkowski's inequality in the $r/2$ norm, which requires that $r/2 \geq 1$. The author is grateful to Myoung-jae Lee for pointing out this error.

For $1 < r \leq 2$, $x \geq 0$ and $y \geq 0$, the inequality $(x + y)^{r/2} \leq x^{r/2} + y^{r/2}$ can be used in place of Minkowski's inequality to establish the following results for L^r-mixingales satisfying $\|E_{i-m}X_i\|_r \leq c_i\psi_m$. Set $S_j = \sum_{i=1}^{j} X_i$, $\bar{K} = 18[r/(1-r)]^{3/2}$, and $\Psi = \sum_1^\infty \psi_m$.

LEMMA 1.

$$\|\max_{j\leq n}|S_j|\,\|_r \leq \bar{K}\sum_{m=-\infty}^{\infty}\left(\sum_{i=1}^{n} E|E_{i-m}X_{im} - E_{i-m-1}X_i|^r\right)^{1/r}. \quad \blacksquare$$

LEMMA 2.

$$\|\max_{j\leq n}|S_j\|_r \leq 2\bar{K}\Psi\left(\sum_{i=1}^{n} c_i^r\right)^{1/r}. \quad \blacksquare$$

COROLLARY 1. *If* $\Psi < \infty$ *and* $\sum_1^\infty c_i^r < \infty$, *then* S_n *converges almost surely.* ■

COROLLARY 2. *If* $\Psi < \infty$ *and* $\sum_1^\infty (c_i/i)^r < \infty$, *then* $S_n/n \to 0$ *almost surely.* ■

Section 3 concerned zero-mean sequences $\{Y_i\}$ which are L^q near-epoch dependent ($q > 1$) upon some strong-mixing sequence $\{X_i\}$ with mixing coefficients α_m satisfying

$$\|E(Y_i|\mathcal{F}_m) - Y_i\|_q \leq d_i\nu_m, \quad \text{where } \mathcal{F}_m = \sigma(X_t : i - m \leq t \leq i + m).$$

For the case $1 < q < 2$ the following theorem follows directly from Corollary 2 and the near-epoch dependent inequality given in [1]:

THEOREM 2. *If for some* $p > q$, $\sum_1^\infty \nu_m < \infty$, $\sum_1^{\infty_i - q} d_i^q < \infty$, $\sum_1^\infty \alpha_m^{1/q-1/p} < \infty$ *and* $\sum_1^{\infty_i - q}\|Y_i\|_q^p < \infty$, *then* $n^{-1}\sum_1^n Y_i \to 0$ *a.s.* ■

It should also be noted that the original proof of Theorem 2 in [2] worked with the truncated sequence $Y_{1i} = Y_i 1(|Y_i| \leq 1)$, implicitly assuming that Y_{1i} is NED with the same coefficients as Y_i. This is not obviously true, and the author is grateful to Don Andrews for pointing out this error.

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1. Andrews, D.W.K. Laws of large numbers for dependent non-identically distributed random variables. *Econometric Theory* 4 (1988): 458–467.
2. Hansen, B.E. Strong laws for dependent heterogeneous processes. *Econometric Theory* 7 (1991): 213–221.

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