

# **Asymptotic Normality of a Kernel Conditional Quantile Estimator Under Strong Mixing Hypothesis and Left-Truncation**

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## **Abstract**

We consider the estimation of the conditional quantile when the interest variable is subject to left truncation. Under regularity conditions, it is shown that the kernel estimate of the conditional quantile is asymptotically normally distributed, when the data exhibit some kind of dependence. We use asymptotic normality to construct confidence bands for predictors based on the kernel estimate of the conditional median.

**Keywords :** Asymptotic normality, Conditional quantile, Kernel estimate, Strong mixing, Truncated data.

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