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## DYNAMIC TREATMENT EFFECTS OF TEACHER'S AIDES IN AN EXPERIMENT WITH MULTIPLE RANDOMIZATIONS

## **ABSTRACT**

Using data from a large-scale two-stage experiment wherein students and teachers were randomized at both kindergarten entry and first grade to be sorted into classes either with or without full-time teacher's aides, I estimate an econometric model that is uniquely suited to take advantage of this design to determine their effect on academic achievement. The identification strategy produces fully nonparametric dynamic average treatment effects for every treatment path. I find that the use of full-time teacher's aides increases student achievement, but the benefits appear to accrue mostly to those of higher socioeconomic status and to White students. A cost-benefit analysis shows that full-time teacher's aides may be a competitive alternative to class size reductions in terms of net social benefits. (JEL I21, I28)