## Supplementary materials for $Small\ sample\ methods\ for\ cluster-robust\ variance\ estimation$ and $hypothesis\ testing\ in\ fixed\ effects\ models$

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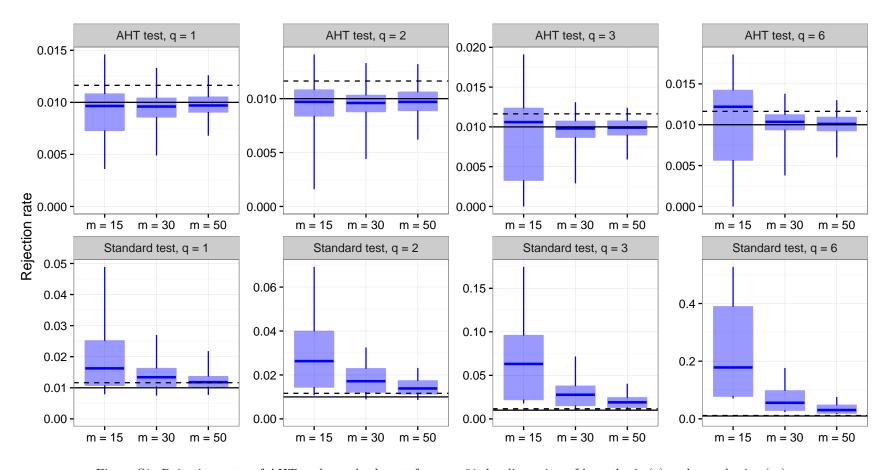


Figure S1: Rejection rates of AHT and standard tests for  $\alpha = .01$ , by dimension of hypothesis (q) and sample size (m).

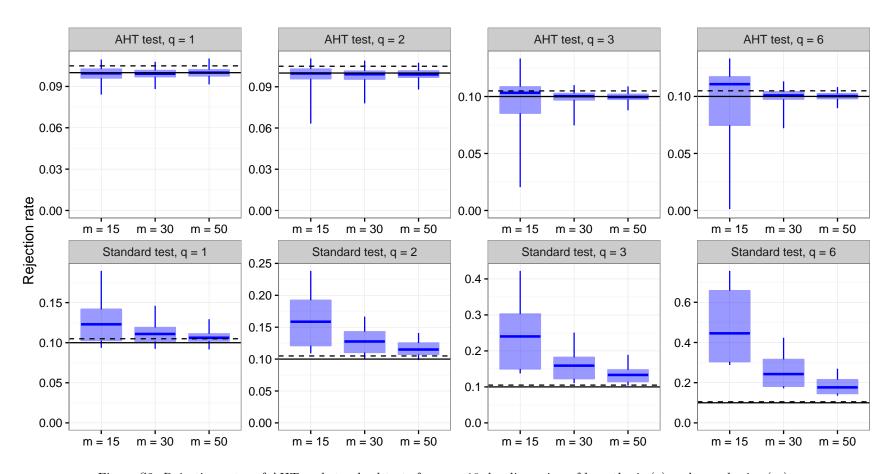


Figure S2: Rejection rates of AHT and standard tests for  $\alpha = .10$ , by dimension of hypothesis (q) and sample size (m).

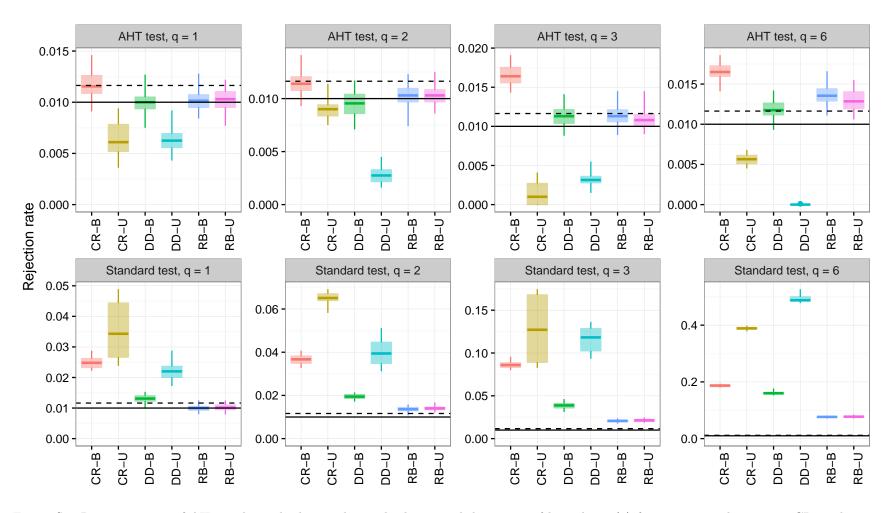


Figure S3: Rejection rates of AHT and standard tests, by study design and dimension of hypothesis (q) for  $\alpha = .01$  and m = 15. CR = cluster-randomized design; DD = difference-in-differences design; RB = randomized block design; B = balanced; U = unbalanced.

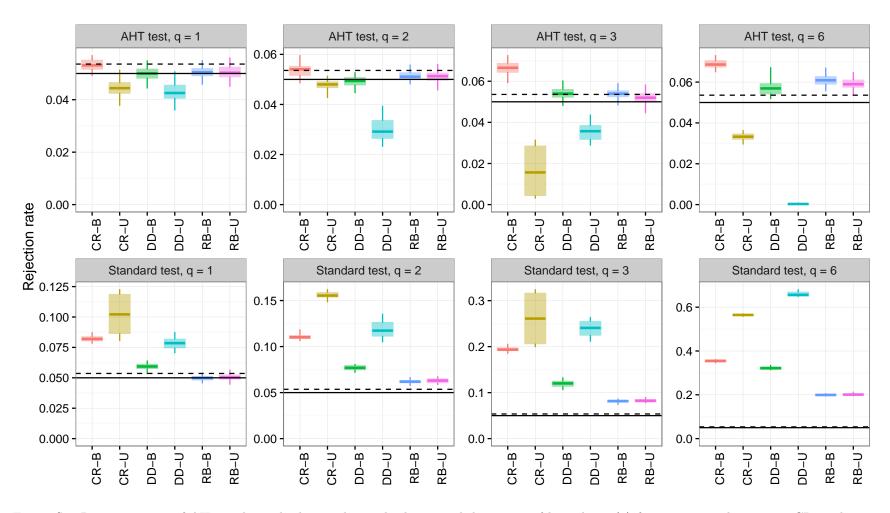


Figure S4: Rejection rates of AHT and standard tests, by study design and dimension of hypothesis (q) for  $\alpha = .05$  and m = 15. CR = cluster-randomized design; DD = difference-in-differences design; RB = randomized block design; B = balanced; U = unbalanced.

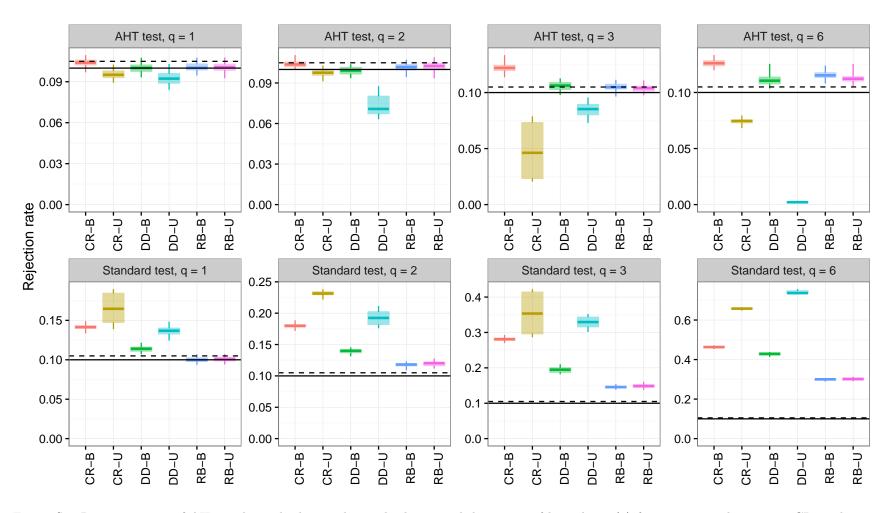


Figure S5: Rejection rates of AHT and standard tests, by study design and dimension of hypothesis (q) for  $\alpha = .10$  and m = 15. CR = cluster-randomized design; DD = difference-in-differences design; RB = randomized block design; B = balanced; U = unbalanced.

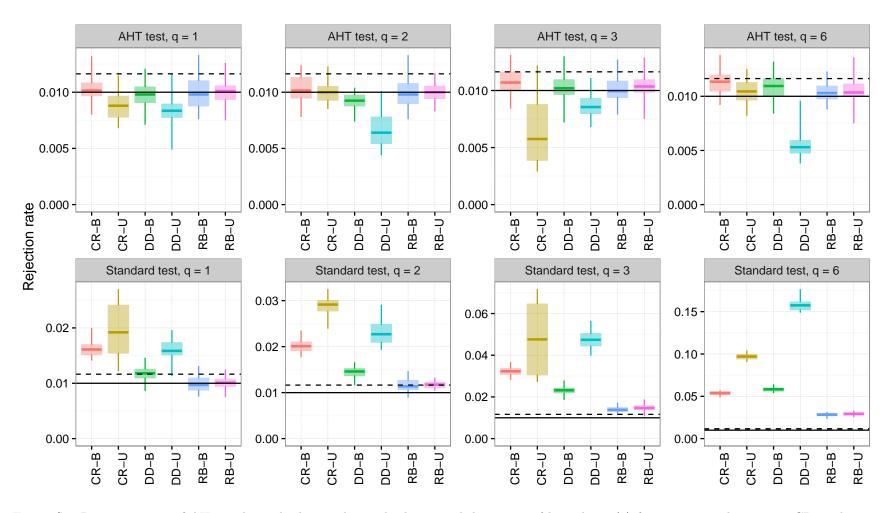


Figure S6: Rejection rates of AHT and standard tests, by study design and dimension of hypothesis (q) for  $\alpha = .01$  and m = 30. CR = cluster-randomized design; DD = difference-in-differences design; RB = randomized block design; B = balanced; U = unbalanced.

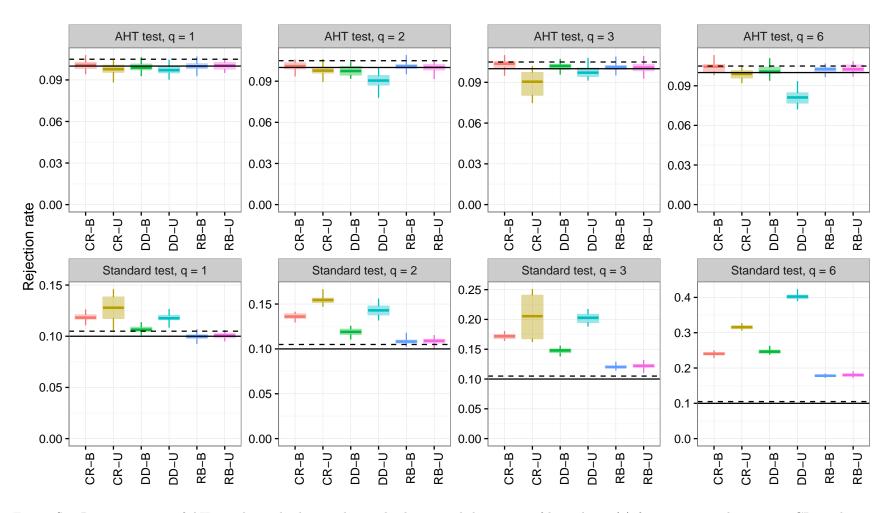


Figure S7: Rejection rates of AHT and standard tests, by study design and dimension of hypothesis (q) for  $\alpha = .10$  and m = 30. CR = cluster-randomized design; DD = difference-in-differences design; RB = randomized block design; B = balanced; U = unbalanced.

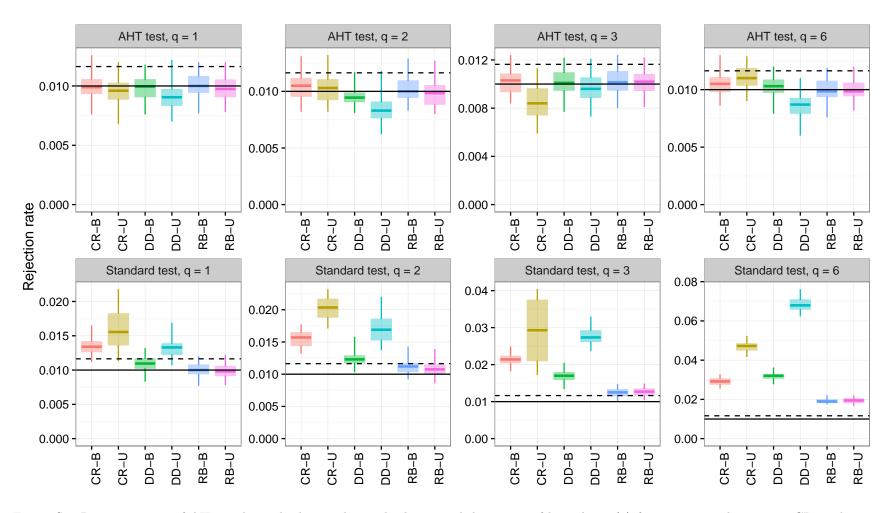


Figure S8: Rejection rates of AHT and standard tests, by study design and dimension of hypothesis (q) for  $\alpha = .01$  and m = 50. CR = cluster-randomized design; DD = difference-in-differences design; RB = randomized block design; B = balanced; U = unbalanced.

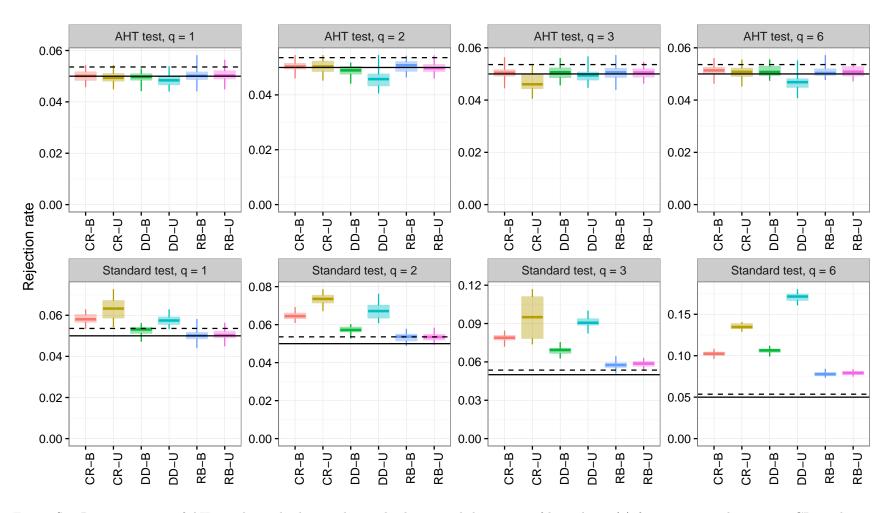


Figure S9: Rejection rates of AHT and standard tests, by study design and dimension of hypothesis (q) for  $\alpha = .05$  and m = 50. CR = cluster-randomized design; DD = difference-in-differences design; RB = randomized block design; B = balanced; U = unbalanced.

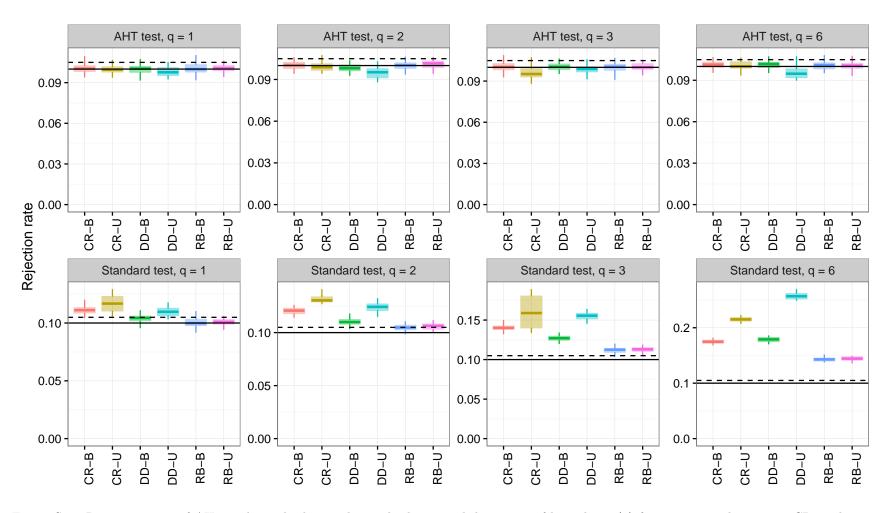


Figure S10: Rejection rates of AHT and standard tests, by study design and dimension of hypothesis (q) for  $\alpha = .10$  and m = 50. CR = cluster-randomized design; DD = difference-in-differences design; RB = randomized block design; B = balanced; U = unbalanced.

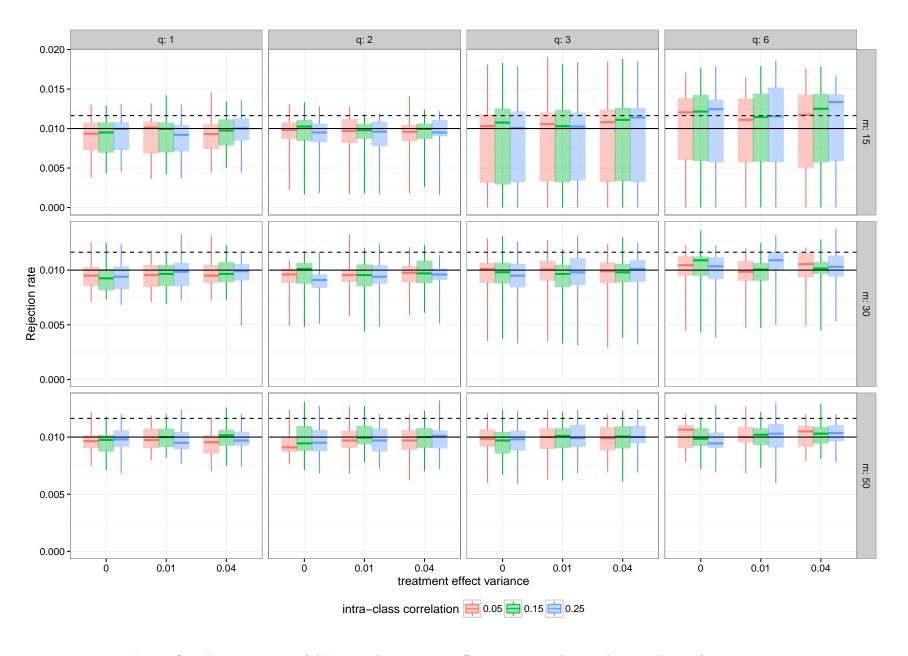


Figure S11: Rejection rates of AHT test, by treatment effect variance and intra-class correlation for  $\alpha = .01$ .

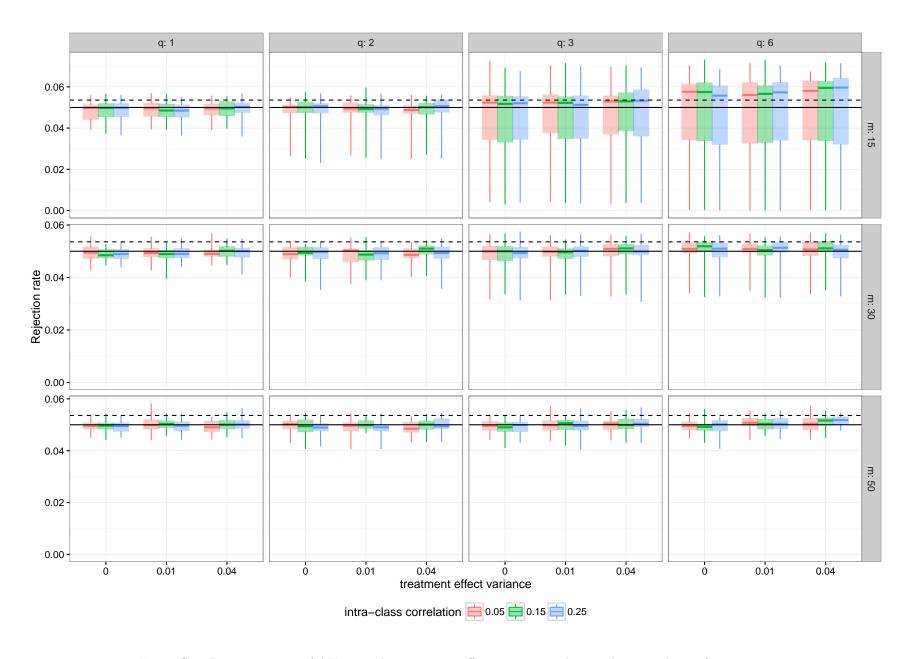


Figure S12: Rejection rates of AHT test, by treatment effect variance and intra-class correlation for  $\alpha = .05$ .

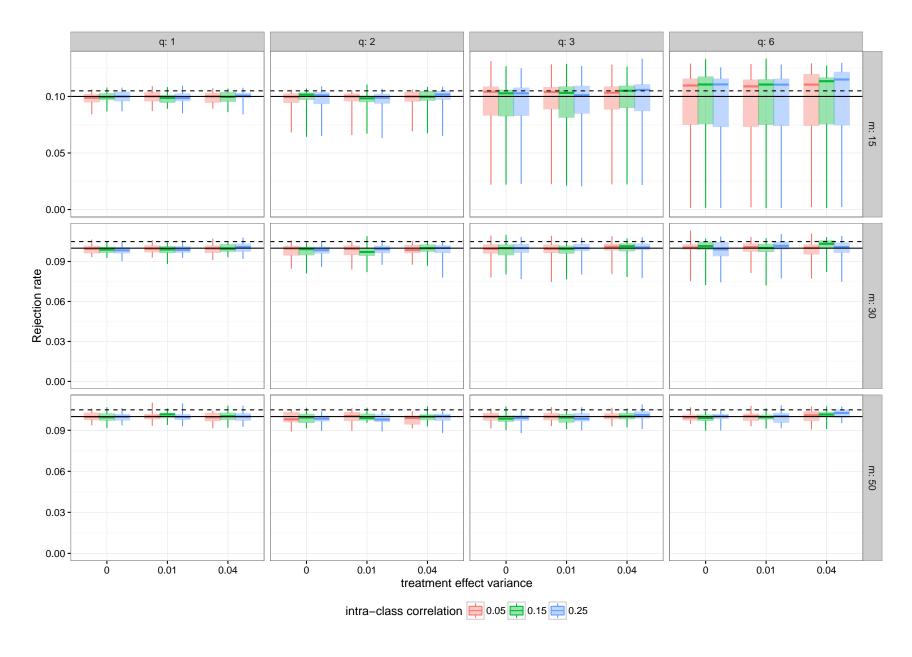


Figure S13: Rejection rates of AHT test, by treatment effect variance and intra-class correlation for  $\alpha = .10$ .