

Table 1: Impact of cross-fitting on TMLE and one-step ATE estimators using random forests (RF: 200 trees; min node size = 1; CF: 5-fold cross-fitting).

		TMLEs						One-step estimators					
		<i>Univariate Binary</i>		<i>Univariate Continuous</i>				<i>Univariate Binary</i>		<i>Univariate Continuous</i>			
		$\psi_1(\hat{Q}^*)$		$\psi_{2a}(\hat{Q}^*)$		$\psi_{2b}(\hat{Q}^*)$		$\psi_1^+(\hat{Q})$		$\psi_{2a}^+(\hat{Q})$		$\psi_{2b}^+(\hat{Q})$	
		RF	CF	RF	CF	RF	CF	RF	CF	RF	CF	RF	CF
n=500	Bias	-0.175	-0.021	-0.368	0.058	-0.518	0.02	-0.105	-0.027	-0.088	0.068	-0.524	0.018
	SD	0.167	0.14	0.379	0.334	0.381	0.288	0.052	0.13	0.429	0.322	0.384	0.289
	MSE	0.059	0.02	0.279	0.115	0.413	0.083	0.014	0.018	0.192	0.108	0.421	0.084
	Coverage	18.1%	83.9%	42.4%	87%	33.9%	88.4%	19.6%	86.6%	53.9%	88.2%	33%	87.7%
	CI width	0.133	0.397	0.657	0.995	0.743	0.88	0.122	0.396	0.657	0.992	0.744	0.879
n=1000	Bias	-0.177	-0.016	-0.38	0.055	-0.52	0.013	-0.102	-0.02	-0.106	0.059	-0.525	0.01
	SD	0.117	0.096	0.259	0.214	0.274	0.221	0.04	0.092	0.288	0.218	0.277	0.223
	MSE	0.045	0.01	0.211	0.049	0.346	0.049	0.012	0.009	0.094	0.051	0.352	0.05
	Coverage	11.7%	89.5%	23.2%	89%	17.4%	87.6%	12.6%	90.6%	49.3%	87.9%	17.5%	88.2%
	CI width	0.105	0.32	0.412	0.7	0.535	0.666	0.101	0.32	0.414	0.699	0.535	0.666
n=2000	Bias	-0.175	-0.01	-0.372	0.065	-0.498	0.025	-0.098	-0.012	-0.12	0.067	-0.504	0.021
	SD	0.083	0.074	0.179	0.149	0.188	0.166	0.034	0.073	0.196	0.151	0.192	0.166
	MSE	0.038	0.006	0.17	0.026	0.283	0.028	0.011	0.005	0.053	0.027	0.291	0.028
	Coverage	5.7%	90.9%	9.9%	89.7%	4.9%	85.9%	8.5%	91.1%	50.9%	89.4%	5.2%	86.3%
	CI width	0.084	0.25	0.294	0.526	0.384	0.506	0.082	0.25	0.295	0.525	0.385	0.505