

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	-0.406	-0.033	-0.123	0.312	-0.214	0.031	-0.114	-0.036	0.422	0.332	-0.217	0.062
	SD	0.59	0.141	0.217	0.431	0.183	0.31	0.051	0.135	0.355	0.382	0.144	0.326
	MSE	0.512	0.021	0.062	0.283	0.079	0.097	0.016	0.019	0.303	0.256	0.068	0.11
	Coverage	4.7%	85.7%	96.6%	72.3%	46.6%	87.5%	21.8%	86.8%	59.3%	71.9%	47.5%	85.1%
	CI width	0.275	0.424	1.01	1.073	0.408	0.956	0.147	0.421	1.018	1.072	0.409	0.959
n=1000	Bias	-0.458	-0.03	-0.165	0.16	-0.207	0.019	-0.111	-0.031	0.314	0.253	-0.217	0.045
	SD	0.442	0.1	0.137	0.237	0.134	0.241	0.041	0.098	0.226	0.261	0.106	0.251
	MSE	0.405	0.011	0.046	0.082	0.061	0.059	0.014	0.011	0.15	0.132	0.058	0.065
	Coverage	5.6%	90%	88.3%	79.6%	32.3%	87.1%	14.5%	90%	51.6%	66%	26.2%	83.9%
	CI width	0.187	0.336	0.661	0.727	0.297	0.711	0.122	0.334	0.664	0.728	0.296	0.713
n=2000	Bias	-0.49	-0.024	-0.146	0.171	-0.186	0.038	-0.106	-0.024	0.288	0.255	-0.206	0.059
	SD	0.328	0.076	0.09	0.164	0.091	0.17	0.035	0.076	0.143	0.18	0.074	0.175
	MSE	0.348	0.006	0.03	0.056	0.043	0.03	0.012	0.006	0.104	0.097	0.048	0.034
	Coverage	4.3%	90.1%	76%	71.7%	18.1%	87.7%	9.3%	90.1%	25.5%	50.1%	10.1%	85.7%
	CI width	0.136	0.26	0.416	0.539	0.215	0.532	0.1	0.258	0.418	0.539	0.215	0.533