

Table 1: Impact of cross-fitting on TMLE and one-step ATE estimators using random forests (RF: 500 trees; min node size = 5 for continuous, 1 for binary; 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	-0.513	-0.033	-0.1	0.311	-0.205	0.03	-0.471	-0.038	0.557	0.328	-0.21	0.057
	SD	0.26	0.142	0.238	0.429	0.196	0.311	0.208	0.133	0.384	0.376	0.148	0.326
	MSE	0.331	0.021	0.066	0.28	0.08	0.098	0.265	0.019	0.457	0.249	0.066	0.11
	Coverage	34.8%	84.5%	97.3%	71.1%	51.3%	86.3%	38%	86.1%	50.7%	72.1%	51.7%	84.5%
	CI width	0.828	0.413	1.108	1.047	0.441	0.923	0.827	0.409	1.115	1.045	0.441	0.926
n=1000	Bias	-0.507	-0.029	-0.148	0.161	-0.199	0.02	-0.463	-0.031	0.432	0.253	-0.211	0.042
	SD	0.186	0.1	0.148	0.237	0.143	0.239	0.151	0.097	0.247	0.259	0.11	0.247
	MSE	0.292	0.011	0.044	0.082	0.06	0.057	0.237	0.01	0.247	0.131	0.057	0.063
	Coverage	13.7%	88.7%	93.3%	78.4%	38.2%	84.7%	13.1%	89.4%	37.6%	65.7%	32.8%	83.3%
	CI width	0.59	0.329	0.722	0.709	0.323	0.692	0.591	0.327	0.726	0.709	0.322	0.693
n=2000	Bias	-0.508	-0.024	-0.129	0.172	-0.176	0.038	-0.462	-0.024	0.397	0.256	-0.2	0.057
	SD	0.129	0.075	0.097	0.161	0.097	0.168	0.107	0.074	0.153	0.177	0.076	0.172
	MSE	0.274	0.006	0.026	0.056	0.041	0.03	0.224	0.006	0.181	0.097	0.046	0.033
	Coverage	1.1%	89.6%	84.6%	70.6%	27.2%	87.4%	1.1%	90%	16%	48.5%	13%	85.5%
	CI width	0.421	0.254	0.454	0.528	0.235	0.52	0.422	0.253	0.456	0.528	0.235	0.521