

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	-0.162	-0.02	-0.312	0.055	-0.486	0.017	-0.103	-0.028	0.009	0.066	-0.492	0.014
	SD	0.166	0.14	0.372	0.331	0.369	0.285	0.051	0.128	0.432	0.318	0.373	0.286
	MSE	0.054	0.02	0.235	0.113	0.373	0.081	0.013	0.017	0.186	0.105	0.381	0.082
	Coverage	17.4%	82.8%	48.8%	86.9%	36.1%	87.3%	18.8%	86.3%	56.7%	87.6%	35.5%	87%
	CI width	0.128	0.389	0.681	0.98	0.717	0.862	0.119	0.388	0.682	0.977	0.718	0.861
n=1000	Bias	-0.162	-0.016	-0.329	0.054	-0.49	0.008	-0.1	-0.021	-0.017	0.059	-0.497	0.005
	SD	0.114	0.096	0.252	0.212	0.267	0.221	0.04	0.091	0.286	0.215	0.271	0.221
	MSE	0.039	0.009	0.172	0.048	0.312	0.049	0.012	0.009	0.082	0.049	0.32	0.049
	Coverage	13.3%	88.5%	30.1%	88.6%	19.5%	86.6%	12.4%	89.7%	52.4%	88.3%	18.3%	87.1%
	CI width	0.101	0.315	0.417	0.69	0.52	0.656	0.098	0.315	0.42	0.689	0.52	0.655
n=2000	Bias	-0.161	-0.01	-0.326	0.063	-0.473	0.019	-0.096	-0.013	-0.041	0.065	-0.479	0.016
	SD	0.083	0.074	0.176	0.148	0.186	0.164	0.034	0.072	0.197	0.15	0.189	0.164
	MSE	0.033	0.006	0.137	0.026	0.259	0.027	0.01	0.005	0.041	0.027	0.265	0.027
	Coverage	7.8%	90.4%	14.4%	89.8%	6.4%	86.5%	8.9%	90.7%	56.6%	88.9%	6.3%	86.5%
	CI width	0.081	0.246	0.292	0.52	0.376	0.499	0.08	0.246	0.294	0.519	0.376	0.499