Table 1: Experimental results on IHDP and NEWS datasets. Datasets is provided by LTEE. These two datasets assume there is no latent confounder.

	IHDP		NEWS	
method	ϵ_{PEHE}	ϵ_{ATE}	ϵ_{PEHE}	ϵ_{ATE}
$\hat{\tau}_{exp}$ (using exp Y)	5.3909 ± 2.5709	0.9114 ± 0.8962	112.0628 ± 61.0340	3.9009 ± 2.2637
T-learner (using obs Y)	2.3069 ± 0.9249	0.1706 ± 0.1472	117.6697 ± 58.6992	3.6562 ± 3.7098
LTEE	2.9627 ± 0.8568	1.1522 ± 0.5722	124.8787 ± 61.9725	2.9201 ± 1.6038
Persistent Confounding	/	385.39342 ± 629.05114	/	30.4258 ± 17.6026
Surrogate Index	/	1.4251 ± 1.0936	/	7.1181 ± 8.7027
Latent Unconfoundedness	/	1.5179 ± 0.8486	/	6.3088 ± 7.9951
CAECB (using first S)	4.1054 ± 1.9939	0.5491 ± 0.6072	117.9102 ± 59.8675	2.5937 ± 2.5383
CAECB (using middle S)	3.7786 ± 0.8519	0.5071 ± 0.2518	116.3279 ± 58.8894	2.8698 ± 2.7798
CAECB (using last S)	4.5367 ± 1.3392	0.5958 ± 0.4729	114.8197 ± 57.8797	3.1969 ± 3.2455
CAECB (using random S)	4.0441 ± 1.0971	0.7435 ± 0.2626	116.5648 ± 59.3505	2.7700 ± 2.6345
$\hat{\tau}_{ours}$	2.3069 ± 0.9249	0.1706 ± 0.1471	125.5672 ± 64.7859	5.1395 ± 3.2836