

**Supplementary Materials for “Regression Analysis of Interval-censored Failure Time Data under
Semiparametric Transformation Models with Missing Covariates”**

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Tables S1 and S2 present the results based on the settings described in Section 5 for the PO model.

Table S1: Simulation results with continuous X under PO model.

Approach	Parameters	$n = 200$				$n = 400$			
		Bias	SD	ESE	CP	Bias	SD	ESE	CP
FULL	$\alpha = -0.8$	-0.0161	0.1504	0.1531	0.961	-0.0073	0.1057	0.1073	0.954
	$\beta_1 = 0.5$	0.0142	0.2779	0.2756	0.953	0.0051	0.1876	0.1938	0.953
	$\beta_2 = -0.6$	0.0080	0.3352	0.3117	0.941	-0.0078	0.2205	0.2190	0.949
CCA	$\alpha = -0.8$	0.0262	0.2050	0.2068	0.949	0.0383	0.1498	0.1440	0.938
	$\beta_1 = 0.5$	-0.0146	0.3886	0.3712	0.945	-0.0275	0.2523	0.2596	0.954
	$\beta_2 = -0.6$	-0.1255	0.4530	0.4239	0.945	-0.1291	0.3016	0.2954	0.933
IPW-I	$\alpha = -0.8$	-0.0513	0.2272	0.2469	0.972	-0.0310	0.1635	0.1646	0.949
	$\beta_1 = 0.5$	0.0188	0.4441	0.4458	0.940	-0.0010	0.2805	0.3000	0.954
	$\beta_2 = -0.6$	-0.0267	0.4942	0.4986	0.952	-0.0215	0.3333	0.3329	0.951
IPW-II	$\alpha = -0.8$	0.0257	0.2064	0.2259	0.960	0.0377	0.1504	0.1507	0.938
	$\beta_1 = 0.5$	-0.0153	0.3910	0.3983	0.959	-0.0269	0.2533	0.2685	0.957
	$\beta_2 = -0.6$	-0.1248	0.4569	0.4620	0.959	-0.1294	0.3033	0.3088	0.937
NN-1	$\alpha = -0.8$	-0.0416	0.2397	0.2574	0.959	-0.0198	0.1755	0.1729	0.946
	$\beta_1 = 0.5$	0.0124	0.3021	0.3006	0.952	0.0027	0.1999	0.2082	0.962
	$\beta_2 = -0.6$	-0.0154	0.3594	0.3658	0.962	-0.0207	0.2541	0.2514	0.943
NN-3	$\alpha = -0.8$	0.0435	0.2349	0.2500	0.955	-0.0210	0.1707	0.1707	0.943
	$\beta_1 = 0.5$	0.0138	0.3002	0.2990	0.952	0.0022	0.1989	0.2082	0.958
	$\beta_2 = -0.6$	-0.0196	0.3543	0.3605	0.956	-0.0203	0.2491	0.2502	0.947
NN-5	$\alpha = -0.8$	-0.0443	0.2334	0.2467	0.958	-0.0213	0.1693	0.1695	0.947
	$\beta_1 = 0.5$	0.0121	0.2981	0.2977	0.954	0.0027	0.1980	0.2076	0.960
	$\beta_2 = -0.6$	-0.0261	0.3547	0.3570	0.955	-0.0253	0.2472	0.2489	0.945
NN-10	$\alpha = -0.8$	-0.0351	0.2286	0.2415	0.963	-0.0213	0.1672	0.1679	0.945
	$\beta_1 = 0.5$	0.0090	0.2944	0.2950	0.955	0.0008	0.1967	0.2069	0.960
	$\beta_2 = -0.6$	-0.0457	0.3491	0.3528	0.958	-0.0365	0.2437	0.2469	0.948

Table S2: Simulation results with discrete X under PO model.

Approach	Parameters	$n = 200$				$n = 400$			
		Bias	SD	ESE	CP	Bias	SD	ESE	CP
FULL	$\alpha = -0.8$	-0.0101	0.2783	0.2805	0.951	-0.0047	0.2009	0.1969	0.949
	$\beta_1 = 0.5$	0.0000	0.2701	0.2637	0.951	0.0015	0.1866	0.1855	0.955
	$\beta_2 = -0.6$	-0.0188	0.2682	0.2678	0.946	0.0016	0.1952	0.1881	0.945
CCA	$\alpha = -0.8$	0.0555	0.4154	0.3875	0.932	0.0467	0.2755	0.2702	0.937
	$\beta_1 = 0.5$	-0.0235	0.3684	0.3593	0.945	-0.0269	0.2560	0.2513	0.948
	$\beta_2 = -0.6$	-0.1454	0.3783	0.3683	0.933	-0.1214	0.2528	0.2566	0.933
IPW-I	$\alpha = -0.8$	-0.0066	0.4617	0.4779	0.948	-0.0158	0.3072	0.3104	0.947
	$\beta_1 = 0.5$	0.0259	0.4205	0.4317	0.955	0.0158	0.2893	0.2917	0.949
	$\beta_2 = -0.6$	-0.0493	0.4193	0.4288	0.948	-0.0166	0.2722	0.2875	0.958
IPW-II	$\alpha = -0.8$	0.0562	0.4167	0.4204	0.949	0.0465	0.2755	0.2812	0.950
	$\beta_1 = 0.5$	-0.0234	0.3686	0.3839	0.953	-0.0269	0.2548	0.2601	0.955
	$\beta_2 = -0.6$	-0.1458	0.3834	0.3978	0.948	-0.1223	0.2543	0.2667	0.945
NN-1	$\alpha = -0.8$	0.0129	0.4923	0.5539	0.959	-0.0117	0.3399	0.3845	0.953
	$\beta_1 = 0.5$	-0.0039	0.2796	0.2850	0.956	0.0025	0.1949	0.1980	0.952
	$\beta_2 = -0.6$	-0.0221	0.2859	0.2891	0.957	-0.0012	0.2014	0.2012	0.949
NN-3	$\alpha = -0.8$	0.0111	0.4785	0.5318	0.954	-0.0107	0.3249	0.3606	0.950
	$\beta_1 = 0.5$	-0.0046	0.2779	0.2816	0.957	0.0043	0.1944	0.1964	0.951
	$\beta_2 = -0.6$	-0.0195	0.2830	0.2859	0.959	0.0004	0.2009	0.1999	0.946
NN-5	$\alpha = -0.8$	0.0084	0.4685	0.5124	0.953	-0.0089	0.3206	0.3484	0.951
	$\beta_1 = 0.5$	-0.0055	0.2772	0.2805	0.959	0.0047	0.1939	0.1958	0.953
	$\beta_2 = -0.6$	-0.0167	0.2816	0.2843	0.956	0.0027	0.2005	0.1988	0.946
NN-10	$\alpha = -0.8$	0.0271	0.4588	0.4875	0.948	-0.0025	0.3155	0.3361	0.953
	$\beta_1 = 0.5$	-0.0094	0.2769	0.2775	0.956	0.0030	0.1937	0.1946	0.949
	$\beta_2 = -0.6$	-0.0114	0.2783	0.2814	0.954	0.0062	0.1998	0.1974	0.947