## $Scenrario\_test\_160105$

intercept: 0

sample size : 200

simulation time : 100

simulation time: 1 loss\_rate: 0.625

error\_independent: FALSE

missing\_method: xy

missing\_location: 1

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $file\_name: ./data/beta\_2\_1.5\_1\_n\_200\_lambda\_location\_l1\_30\_error\_independent\_FALSE\_x\_missing\_location\_1.Rdata\_location\_2.Rdata\_location\_2.Rdata\_location\_2.Rdata\_location\_2.Rdata\_location\_3.Rd$ table\_original

	$^{\mathrm{rho}}$	r_sd	$L_{-} inf$	$_{ m L\_sd}$	$L_{-}1$	$L\_1\_{ m sd}$	$L_2$	$L_2 L_2 sd$	tn0e0	t0en0	$tn0e0\_sd$	$t0en0\_sd$
FLASSO	0	0	0.136	0.055	0.322	0.146	0.177	0.068	0	1.68	0	1.340
FSCAD	0	0	0.126	0.058	0.285	0.182	0.166	0.081	0	0.73	0	1.413
FMCP	0	0	0.123	0.057	0.268	0.176	0.160	0.079	0	0.48	0	1.168
CLASSO	0	0	0.210	0.086	0.516	0.237	0.278	0.104	0	2.06	0	1.594
CSCAD	0	0	0.169	0.095	0.355	0.265	0.214	0.129	0	0.51	0	1.096
$_{ m CMCP}$	0	0	0.173	0.095	0.380	0.281	0.223	0.129	0	0.66	0	1.304
PLASSO	0	0	0.441	0.227	1.170	0.484	0.602	0.278	0	3.59	0	1.164
PSCAD1	0	0	0.386	0.226	0.910	0.662	0.511	0.308	0	0.87	0	1.412
PSCAD2	0	0	0.395	0.231	0.932	0.654	0.523	0.310	0	0.85	0	1.266
PSCAD3	0	0	0.385	0.234	0.917	0.649	0.511	0.313	0	06.0	0	1.185
PMCP1	0	0	0.379	0.229	0.897	0.667	0.501	0.312	0	0.86	0	1.356
PMCP2	0	0	0.390	0.229	0.942	0.643	0.523	0.303	0	0.94	0	1.286
PMCP3	0	0	0.386	0.226	0.922	0.632	0.514	0.300	0	0.90	0	1.133

intercept: 0

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: FALSE

missing\_method: xy

missing\_location: 3

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $file\_name: ./data/beta\_2\_1.5\_1\_n\_200\_lambda\_location\_11\_30\_error\_independent\_FALSE\_x\_missing\_location\_3.Rdata\_location\_3.Rd$ table\_original

	rho	r_sd	L_inf	$L_{-sd}$	$L_{-1}$	$L_{-1}$ sd	$L_2$	$L_2$ sd	tn0e0	t0en0	$tn0e0_sd$	$t0en0\_sd$
FLASSO	0	0	0.140	0.053	0.353	0.175	0.187	0.072	0	2.00	0	1.504
FSCAD	0	0	0.123	0.058	0.264	0.159	0.158	0.077	0	0.51	0	1.000
FMCP	0	0	0.125	0.060	0.256	0.155	0.157	0.077	0	0.33	0	0.911
CLASSO	0	0	0.234	0.084	0.575	0.239	0.310	0.104	0	2.07	0	1.38(
CSCAD	0	0	0.198	0.086	0.413	0.227	0.249	0.1111	0	0.78	0	1.18(
CMCP	0	0	0.203	0.088	0.413	0.225	0.255	0.114	0	0.46	0	0.915
PLASSO	0	0	0.424	0.191	1.177	0.446	0.593	0.251	0	3.84	0	1.002
PSCAD1	0	0	0.383	0.202	0.862	0.555	0.505	0.291	0	0.76	0	1.185
PSCAD2	0	0	0.387	0.191	0.875	0.524	0.510	0.267	0	0.82	0	1.167
PSCAD3	0	0	0.391	0.202	0.897	0.564	0.520	0.291	0	0.79	0	1.06
PMCP1	0	0	0.382	0.202	0.867	0.559	0.506	0.292	0	0.74	0	1.16
PMCP2	0	0	0.392	0.202	0.903	0.553	0.523	0.288	0	0.85	0	1.104
PMCP3	0	0	0.392	0.204	0.909	0.561	0.523	0.292	0	0.87	0	1.089

intercept: 0

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: FALSE

missing\_method: xy

missing\_location: 8

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $file\_name: ./data/beta\_2\_1.5\_1\_n\_200\_lambda\_location\_l1\_30\_error\_independent\_FALSE\_x\_missing\_location\_8.Rdata\_location\_8.Rd$ table\_original

	,	-		,	,	,				0	0	
	$_{\rm rho}$	$r_{-}$ sd	$\Gamma_{-}$ inf	$\Gamma$		$L_{-}1_{-}\mathrm{sd}$	$\Gamma_{-}^{2}$	$\mathrm{L}_{-}^{2}\mathrm{sd}$	tn0e0	t0en0	${ m tn0e0\_sd}$	$t0en0\_sd$
FLASSO	0	0	0.141	0.060	0.379	0.195	0.193	0.083	0	2.29	0	1.622
FSCAD	0	0	0.126	0.072	0.296	0.238	0.167	0.105	0	0.70	0	1.360
FMCP	0	0	0.122	0.066	0.269	0.197	0.158	0.094	0	0.48	0	1.078
CLASSO	0	0	0.264	0.088	0.673	0.306	0.352	0.119	0	2.23	0	1.601
CSCAD	0	0	0.215	0.097	0.488	0.349	0.278	0.141	0	0.77	0	1.420
$_{ m CMCP}$	0	0	0.214	0.094	0.496	0.359	0.280	0.141	0	0.76	0	1.464
PLASSO	0	0	0.473	0.207	1.282	0.501	0.657	0.274	0	3.35	0	1.226
PSCAD1	0	0	0.416	0.214	0.992	0.631	0.560	0.312	0	0.88	0	1.225
PSCAD2	0	0	0.431	0.226	1.044	0.661	0.583	0.327	0	0.91	0	1.207
PSCAD3	0	0	0.432	0.215	1.048	0.634	0.585	0.312	0	0.96	0	1.072
PMCP1	0	0	0.413	0.210	0.980	0.602	0.554	0.302	0	0.85	0	1.158
PMCP2	0	0	0.413	0.212	0.984	0.604	0.554	0.301	0	0.87	0	1.060
PMCP3	С	0	0.445	0.214	1.078	0.617	0.604	0.308	0	0.89	0	1.014

 $beta: 2\ 1.5\ 1\ 0\ 0\ 0\ 0\ 0$ 

intercept: 0

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: TRUE

missing\_method: xy

missing\_location: 1

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $file\_name: \ ./data/beta\_2\_1.5\_1\_n\_200\_lambda\_location\_l1\_30\_error\_independent\_TRUE\_x\_missing\_location\_1.Rdata\_lambda\_location\_lambda\_locati$ 

	$^{\mathrm{rho}}$	$\mathbf{r}_{-}\mathbf{sd}$	$\mathrm{L\_inf}$	$L_{\rm sd}$	$L_{-}1$	$L_1_sd$	$L_2$	$L_2$ sd	tn0e0	t0en0	$\rm tn0e0\_sd$	$t0en0\_sd$
FLASSO	0	0	0.129	0.044	0.344	0.134	0.176	0.058	0	2.56	0	1.610
FSCAD	0	0	0.103	0.048	0.224	0.144	0.132	0.066	0	0.70	0	1.382
$_{ m FMCP}$	0	0	0.101	0.049	0.212	0.139	0.129	0.066	0	0.43	0	1.130
CLASSO	0	0	0.246	0.096	0.622	0.208	0.330	0.110	0	2.51	0	1.54
CSCAD	0	0	0.180	0.082	0.369	0.200	0.224	0.101	0	0.67	0	1.40?
CMCP	0	0	0.179	0.083	0.360	0.195	0.221	0.100	0	0.49	0	1.20
PLASSO	0	0	0.411	0.213	1.074	0.438	0.557	0.263	0	3.70	0	1.09
PSCAD1	0	0	0.311	0.200	0.704	0.525	0.408	0.269	0	0.61	0	$1.15^{\circ}$
PSCAD2	0	0	0.351	0.210	0.818	0.539	0.468	0.282	0	0.75	0	$1.11^{2}$
PSCAD3	0	0	0.338	0.208	0.774	0.552	0.444	0.281	0	0.69	0	0.97
PMCP1	0	0	0.310	0.204	0.712	0.524	0.410	0.271	0	0.62	0	1.13
PMCP2	0	0	0.345	0.212	0.800	0.554	0.457	0.288	0	0.74	0	1.01
PMCP3	0	0	0.336	0.217	0.784	0.573	0.447	0.296	0	0.68	0	0.92

intercept: 0

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: TRUE

missing\_method: xy

missing\_location: 3

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $file\_name: \ ./data/beta\_2\_1.5\_1\_n\_200\_lambda\_location\_11\_30\_error\_independent\_TRUE\_x\_missing\_location\_3.Rdata\_location\_3.R$ table\_original

	rho	r_sd	L_inf	L_sd	$L_{-1}$	$L_{-}1_{-}\mathrm{sd}$	$L_2$	$L_2$ sd	tn0e0	t0en0	$tn0e0\_sd$	$t0en0\_sd$
FLASSO	0	0	0.125	0.045	0.355	0.145	0.177	0.061	0	2.64	0	1.481
FSCAD	0	0	0.108	0.043	0.227	0.137	0.136	0.060	0	0.59	0	1.223
$_{ m FMCP}$	0	0	0.109	0.044	0.243	0.162	0.141	0.066	0	0.67	0	1.378
CLASSO	0	0	0.266	0.091	0.709	0.212	0.365	0.111	0	2.98	0	1.435
CSCAD	0	0	0.207	0.084	0.438	0.199	0.262	0.102	0	0.79	0	1.285
$_{ m CMCP}$	0	0	0.212	0.078	0.451	0.203	0.269	0.097	0	0.75	0	1.395
PLASSO	0	0	0.422	0.203	1.179	0.440	0.594	0.257	0	3.85	0	1.135
PSCAD1	0	0	0.374	0.251	0.837	0.614	0.489	0.333	0	0.77	0	1.145
PSCAD2	0	0	0.389	0.267	0.893	0.658	0.515	0.356	0	0.82	0	1.058
PSCAD3	0	0	0.392	0.267	0.903	0.658	0.521	0.359	0	0.84	0	1.032
PMCP1	0	0	0.374	0.251	0.844	0.609	0.490	0.331	0	0.81	0	1.089
PMCP2	0	0	0.379	0.261	0.880	0.645	0.503	0.347	0	0.81	0	1.012
PMCP3	С	О	0.397	0.272	0.930	0.678	0.531	0.366	0	0.80	0	0.932

intercept: 0

sample size: 200

simulation time: 100

loss\_rate: 0.625

error\_independent: TRUE

missing\_method: xy missing\_location: 8

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$  $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$   $file\_name: \ ./data/beta\_2\_1.5\_1\_n\_200\_lambda\_location\_11\_30\_error\_independent\_TRUE\_x\_missing\_location\_8.Rdata\_1.8.Rdata\_location\_8.Rdata\_location\_8.Rdata\_1.8.Rdata_1.8.Rdata$ 

	rho	r_sd	L_inf	$L_{\rm sd}$	$L_{-1}$	$L_1$ sd	$L_2$	$L_2$ sd	tn0e0	t0en0	$tn0e0\_sd$	$t0en0\_sd$
FLASSO	0	0	0.134	0.047	0.354	0.136	0.183	0.058	0	2.64	0	1.541
FSCAD	0	0	0.111	0.048	0.242	0.152	0.141	0.066	0	0.75	0	1.431
$_{ m FMCP}$	0	0	0.108	0.047	0.231	0.142	0.137	0.063	0	0.61	0	1.363
CLASSO	0	0	0.278	0.096	0.757	0.245	0.391	0.119	0	2.57	0	1.430
CSCAD	0	0	0.210	0.088	0.443	0.221	0.269	0.111	0	0.46	0	1.009
CMCP	0	0	0.213	0.089	0.448	0.242	0.271	0.116	0	0.42	0	0.976
PLASSO	0	0	0.476	0.220	1.287	0.502	0.663	0.289	0	3.66	0	1.216
PSCAD1	0	0	0.362	0.214	0.836	0.598	0.485	0.307	0	0.58	0	1.093
PSCAD2	0	0	0.390	0.219	0.920	0.609	0.529	0.313	0	0.58	0	1.017
PSCAD3	0	0	0.365	0.212	0.863	0.608	0.495	0.308	0	0.63	0	0.991
PMCP1	0	0	0.362	0.220	0.844	0.614	0.488	0.315	0	0.57	0	1.075
PMCP2	0	0	0.383	0.221	0.899	0.604	0.517	0.313	0	0.66	0	0.977
PMCP3	0	0	0.368	0.214	0.869	0.595	0.500	0.305	0	0.63	0	0.917

intercept: 0

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: FALSE

missing\_method: xy

missing\_location: 1

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $file\_name: \ ./data/beta\_3\_1.5\_0.5\_n\_200\_lambda\_location\_11\_30\_error\_independent\_FALSE\_x\_missing\_location\_1.Rdata\_ror_independent\_FALSE\_x\_missing\_location\_1.Rdata\_ror_independent_ror_independent_ror_indep$ table\_original

	rho	$r\_sd$	$L_{-}$ inf	$L_{\rm sd}$	$L_{-1}$	$L_1_sd$	$L_2$	$L_2$ sd	tn0e0	t0en0	$tn0e0_sd$	$t0en0\_sd$
FLASSO	0	0	0.131	0.047	0.334	0.148	0.178	0.063	0.00	1.94	0.000	1.582
FSCAD	0	0	0.125	0.056	0.279	0.184	0.161	0.079	0.00	0.89	0.000	1.435
FMCP	0	0	0.128	0.058	0.302	0.218	0.170	0.091	0.00	0.83	0.000	1.457
CLASSO	0	0	0.205	0.085	0.517	0.221	0.275	0.099	0.00	2.01	0.000	1.554
CSCAD	0	0	0.188	0.095	0.416	0.260	0.241	0.123	0.03	1.07	0.141	1.305
CMCP	0	0	0.193	0.090	0.412	0.262	0.244	0.117	0.01	0.69	0.100	1.285
PLASSO	0	0	0.545	0.325	1.263	0.507	0.677	0.333	0.00	3.98	0.000	1.110
PSCAD1	0	0	0.477	0.317	0.985	0.703	0.584	0.374	0.03	1.04	0.141	1.449
PSCAD2	0	0	0.491	0.326	1.015	0.699	0.602	0.379	0.03	1.06	0.171	1.347
PSCAD3	0	0	0.498	0.322	1.030	0.695	0.609	0.376	0.03	1.09	0.171	1.342
PMCP1	0	0	0.473	0.322	0.977	0.707	0.578	0.377	0.02	1.04	0.141	1.428
PMCP2	0	0	0.490	0.331	1.018	0.710	0.600	0.385	0.03	1.08	0.171	1.390
PMCP3	0	0	0.500	0.335	1.040	0.709	0.613	0.390	0.02	1.04	0.141	1.263

intercept: 0

sample size: 200

simulation time : 100

loss\_rate: 0.625

error\_independent: FALSE

missing\_method: xy

missing\_location: 3

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

	rho	r_sd	L_inf	L_sd	$L_{-}1$	$L_1_sd$	$L_2$	$L_2$ sd	tn0e0	t0en0	tn0e0_sd	$t0en0\_sd$
FLASSO	0	0	0.145	0.052	0.363	0.170	0.193	0.070	0.00	2.03	0.000	1.660
FSCAD	0	0	0.127	0.063	0.275	0.187	0.163	0.087	0.00	0.73	0.000	1.188
$_{ m FMCP}$	0	0	0.130	0.063	0.300	0.206	0.171	0.090	0.00	0.74	0.000	1.481
CLASSO	0	0	0.252	0.085	0.637	0.282	0.336	0.112	0.00	2.22	0.000	1.586
CSCAD	0	0	0.273	0.120	0.617	0.315	0.350	0.144	0.10	1.56	0.302	1.578
$_{ m CMCP}$	0	0	0.272	0.128	0.584	0.319	0.341	0.151	0.16	1.12	0.368	1.430
PLASSO	0	0	0.592	0.308	1.375	0.486	0.744	0.323	0.01	3.75	0.100	1.077
PSCAD1	0	0	0.534	0.361	1.117	0.728	0.665	0.415	0.20	1.00	0.402	1.303
PSCAD2	0	0	0.543	0.383	1.143	0.795	0.673	0.441	0.19	0.95	0.394	1.149
PSCAD3	0	0	0.542	0.397	1.135	0.794	0.672	0.448	0.19	0.94	0.394	1.043
PMCP1	0	0	0.517	0.356	1.070	0.699	0.640	0.404	0.20	0.97	0.402	1.314
PMCP2	0	0	0.555	0.394	1.175	0.818	0.689	0.450	0.20	0.99	0.402	1.168
PMCP3	0	С	0.537	0.390	1.151	0.788	0.673	0.440	0.20	0.97	0.402	1.077

 $\mathrm{beta}: 3\ 1.5\ 0.5\ 0\ 0\ 0\ 0$ 

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: FALSE

missing\_method: xy

missing\_location: 8

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $file\_name: \ ./data/beta\_3\_1.5\_0.5\_n\_200\_lambda\_location\_11\_30\_error\_independent\_FALSE\_x\_missing\_location\_8.Rdata\_ramerates and the substraction of the substraction$ table\_original

	rho	r_sd	L_inf	L_sd	$L_{-}1$	$L_{-1}$ sd	$L_2$	$L_2$ sd	tn0e0	t0en0	$tn0e0\_sd$	t0en0_sd
FLASSO	0	0	0.140	0.053	0.345	0.135	0.188	0.063	0.00	1.88	0.000	1.320
FSCAD	0	0	0.127	0.053	0.284	0.164	0.165	0.073	0.00	0.84	0.000	1.261
FMCP	0	0	0.129	0.053	0.289	0.170	0.169	0.076	0.00	0.63	0.000	1.134
CLASSO	0	0	0.251	0.086	0.612	0.227	0.331	0.097	0.00	2.11	0.000	1.517
CSCAD	0	0	0.215	0.103	0.505	0.284	0.283	0.134	0.03	1.33	0.171	1.464
$_{\rm CMCP}$	0	0	0.223	0.110	0.504	0.302	0.292	0.140	0.05	0.90	0.219	1.411
PLASSO	0	0	0.654	0.308	1.421	0.513	0.795	0.323	0.00	3.60	0.000	1.20
PSCAD1	0	0	0.464	0.296	0.888	0.560	0.555	0.333	0.02	0.67	0.141	1.08
PSCAD2	0	0	0.485	0.325	0.937	0.625	0.581	0.368	0.02	0.67	0.141	1.01
PSCAD3	0	0	0.500	0.348	0.973	0.679	0.600	0.395	0.02	0.63	0.141	0.95(
PMCP1	0	0	0.465	0.306	0.893	0.600	0.556	0.346	0.02	0.67	0.141	1.064
PMCP2	0	0	0.480	0.332	0.940	0.644	0.578	0.376	0.02	0.65	0.141	0.957
PMCP3	0	0	0.502	0.351	0.975	0.683	0.601	0.398	0.02	0.06	0.141	0.901

 $\mathrm{beta}: 3\ 1.5\ 0.5\ 0\ 0\ 0\ 0$ 

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: TRUE

missing\_method: xy

missing\_location: 1

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

	rho	r_sd	L_inf	L_sd	$L_{-}1$	$L_1$ sd	$L_2$	$L_2$ sd	tn0e0	t0en0	$tn0e0\_sd$	t0en0_sd
FLASSO	0	0	0.127	0.046	0.349	0.145	0.178	0.061	0.00	2.73	0.0	1.448
FSCAD	0	0	0.104	0.048	0.233	0.156	0.134	0.067	0.00	0.90	0.0	1.374
FMCP	0	0	0.103	0.044	0.227	0.144	0.134	0.062	0.00	0.67	0.0	1.215
CLASSO	0	0	0.207	0.078	0.530	0.199	0.277	0.090	0.00	2.69	0.0	1.489
CSCAD	0	0	0.157	0.080	0.358	0.211	0.203	0.100	0.00	1.35	0.0	1.533
$_{ m CMCP}$	0	0	0.153	0.074	0.331	0.206	0.195	0.096	0.00	0.78	0.0	1.338
PLASSO	0	0	0.551	0.319	1.203	0.496	0.665	0.335	0.00	4.06	0.0	1.03
PSCAD1	0	0	0.435	0.305	0.855	0.577	0.525	0.346	0.01	0.91	0.1	1.25(
PSCAD2	0	0	0.447	0.315	0.879	0.583	0.538	0.354	0.01	0.79	0.1	1.166
PSCAD3	0	0	0.443	0.321	0.874	0.601	0.534	0.362	0.01	0.73	0.1	1.100
PMCP1	0	0	0.438	0.312	0.868	0.583	0.530	0.352	0.01	0.83	0.1	1.207
PMCP2	0	0	0.446	0.315	0.880	0.591	0.537	0.355	0.01	0.78	0.1	1.142
PMCP3	С	0	0.456	0.322	0.910	0.608	0.553	0.365	0.01	0.75	0.1	1.058

 $beta: 3\ 1.5\ 0.5\ 0\ 0\ 0\ 0$ 

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: TRUE

missing\_method: xy

missing\_location: 3

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

table\_original

	rho	r_sd	$L_{-}$ inf	L_sd	$L_{-1}$	$L_{-}1_{-}\mathrm{sd}$	$L_{-}2$	$L_2$ sd	tn0e0	t0en0	$tn0e0\_sd$	$t0en0\_sd$
FLASSO	0	0	0.132	0.047	0.363	0.152	0.184	0.061	0.00	2.63	0.000	1.662
FSCAD	0	0	0.112	0.049	0.261	0.175	0.147	0.072	0.00	0.98	0.000	1.470
FMCP	0	0	0.115	0.050	0.265	0.178	0.150	0.073	0.00	0.88	0.000	1.533
CLASSO	0	0	0.274	0.106	0.693	0.234	0.370	0.121	0.03	2.66	0.171	1.506
CSCAD	0	0	0.274	0.130	0.557	0.250	0.339	0.139	0.12	1.23	0.327	1.434
$_{\rm CMCP}$	0	0	0.279	0.137	0.546	0.258	0.340	0.143	0.19	0.83	0.394	1.407
PLASSO	0	0	0.561	0.295	1.305	0.492	0.702	0.315	0.01	3.90	0.100	0.969
PSCAD1	0	0	0.538	0.371	1.133	0.735	0.674	0.437	0.27	1.07	0.446	1.380
PSCAD2	0	0	0.518	0.380	1.099	0.750	0.653	0.448	0.24	0.95	0.429	1.184
PSCAD3	0	0	0.531	0.381	1.124	0.773	0.668	0.452	0.24	06.0	0.429	1.106
PMCP1	0	0	0.523	0.369	1.092	0.727	0.652	0.432	0.26	1.10	0.441	1.352
PMCP2	0	0	0.521	0.373	1.096	0.740	0.654	0.441	0.24	0.89	0.429	1.081
PMCP3	0	0	0.528	0.376	1.116	0.760	0.662	0.445	0.25	0.92	0.435	1.116

 $\mathrm{beta}: 3\ 1.5\ 0.5\ 0\ 0\ 0\ 0$ 

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: TRUE

missing\_method: xy

missing\_location: 8

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

	rho	r_sd	L_inf	$L_{\rm sd}$	$L_{-1}$	$L_1$ sd	$L_{-}^{2}$	$L_2$ sd	tn0e0	t0en0	$tn0e0\_sd$	$t0en0\_sd$
FLASSO	0	0	0.125	0.052	0.331	0.143	0.172	0.063	0.00	2.41	0.000	1.583
FSCAD	0	0	0.105	0.052	0.231	0.156	0.135	0.070	0.00	0.79	0.000	1.328
$_{ m FMCP}$	0	0	0.106	0.053	0.227	0.158	0.134	0.071	0.00	0.65	0.000	1.321
CLASSO	0	0	0.276	0.104	0.703	0.245	0.370	0.120	0.00	2.78	0.000	1.567
CSCAD	0	0	0.208	0.091	0.457	0.264	0.266	0.120	0.00	1.17	0.000	1.393
CMCP	0	0	0.213	0.094	0.457	0.270	0.270	0.120	0.01	0.78	0.100	1.353
PLASSO	0	0	0.637	0.380	1.394	0.619	0.775	0.409	0.00	3.89	0.000	1.100
PSCAD1	0	0	0.559	0.439	1.087	0.794	0.671	0.501	0.03	0.86	0.171	1.172
PSCAD2	0	0	0.561	0.476	1.103	0.855	0.676	0.541	0.03	0.88	0.171	1.217
PSCAD3	0	0	0.570	0.485	1.133	0.864	0.691	0.548	0.03	0.87	0.171	1.169
PMCP1	0	0	0.557	0.447	1.087	0.802	0.670	0.509	0.03	0.80	0.171	1.110
PMCP2	0	0	0.546	0.445	1.088	0.807	0.662	0.504	0.03	0.84	0.171	1.108
PMCP3	0	0	0.569	0.478	1.129	0.846	0.690	0.540	0.03	0.76	0.171	1.006

intercept: 0

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: FALSE

missing\_method: xy

missing\_location: 1

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $file\_name: ./data/beta\_3\_2\_0.5\_n\_200\_lambda\_location\_11\_30\_error\_independent\_FALSE\_x\_missing\_location\_1.Rdata\_ror_independent\_FALSE\_x\_missing\_location\_1.Rdata\_ror_independent_ror_independent_ror_independe$ table\_original

	rho	r_sd	L_inf	L_sd	$L_{-1}$	$L_{-1}$ sd	$L_2$	$L_2$ sd	tn0e0	t0en0	$tn0e0_sd$	$t0en0\_sd$
FLASSO	0	0	0.140	0.057	0.348	0.170	0.187	0.073	0.00	1.82	0.000	1.579
FSCAD	0	0	0.120	0.061	0.263	0.187	0.155	0.086	0.00	0.61	0.000	1.127
$_{ m FMCP}$	0	0	0.124	0.061	0.274	0.197	0.161	0.089	0.00	0.56	0.000	1.122
CLASSO	0	0	0.221	0.087	0.522	0.219	0.289	0.101	0.00	1.91	0.000	1.590
CSCAD	0	0	0.193	0.100	0.423	0.266	0.250	0.130	0.03	0.94	0.171	1.246
$_{\rm CMCP}$	0	0	0.194	0.092	0.419	0.253	0.248	0.118	0.02	0.74	0.141	1.284
PLASSO	0	0	0.620	0.339	1.403	0.560	0.782	0.378	0.00	3.55	0.000	1.218
PSCAD1	0	0	0.469	0.300	0.978	0.000	0.586	0.365	0.02	0.72	0.141	1.092
PSCAD2	0	0	0.472	0.291	0.992	0.649	0.593	0.355	0.02	0.73	0.141	1.004
PSCAD3	0	0	0.476	0.290	1.002	0.650	0.599	0.354	0.03	0.72	0.171	0.965
PMCP1	0	0	0.475	0.289	0.991	0.640	0.595	0.352	0.03	0.73	0.171	1.081
PMCP2	0	0	0.481	0.316	1.008	0.659	0.604	0.379	0.03	0.68	0.171	0.920
PMCP3	0	0	0.477	0.291	1.014	0.663	0.602	0.358	0.02	0.72	0.141	0.954

intercept: 0

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: FALSE

missing\_method: xy

missing\_location: 3

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $file\_name: ./data/beta\_3\_2\_0.5\_n\_200\_lambda\_location\_11\_30\_error\_independent\_FALSE\_x\_missing\_location\_3.Rdata\_location\_3.Rd$ table\_original

	rho	r_sd	L_inf	$L_{\rm sd}$	$L_{-}1$	$L_1$ sd	$L_2$	$L_2$ sd	tn0e0	t0en0	$tn0e0\_sd$	t0en0_sd
FLASSO	0	0	0.139	0.054	0.357	0.174	0.189	0.072	0.00	1.97	0.000	1.403
FSCAD	0	0	0.122	0.061	0.279	0.193	0.161	0.087	0.00	0.71	0.000	1.233
FMCP	0	0	0.126	0.059	0.278	0.193	0.164	0.087	0.00	0.52	0.000	1.185
CLASSO	0	0	0.260	0.101	0.607	0.238	0.335	0.113	0.01	1.89	0.100	1.53(
CSCAD	0	0	0.262	0.131	0.529	0.283	0.322	0.151	0.12	1.20	0.327	1.255
$_{\rm CMCP}$	0	0	0.271	0.142	0.518	0.283	0.327	0.157	0.19	0.74	0.394	1.203
PLASSO	0	0	0.649	0.341	1.527	0.572	0.835	0.390	0.03	3.67	0.171	1.111
PSCAD1	0	0	0.595	0.425	1.262	0.823	0.757	0.494	0.19	0.88	0.394	1.233
PSCAD2	0	0	0.573	0.409	1.204	0.805	0.723	0.475	0.20	0.83	0.402	1.138
PSCAD3	0	0	0.593	0.427	1.255	0.858	0.749	0.500	0.20	0.85	0.402	1.067
PMCP1	0	0	0.571	0.407	1.200	0.774	0.724	0.471	0.19	0.82	0.394	1.135
PMCP2	0	0	0.575	0.405	1.232	0.797	0.732	0.471	0.19	0.92	0.394	1.169
PMCP3	С	0	0.585	0.425	1.236	0.848	0.738	0.493	0.20	0.81	0.402	1.045

intercept: 0

sample size : 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: FALSE

missing\_method: xy

missing\_location: 8

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $file\_name: ./data/beta\_3\_2\_0.5\_n\_200\_lambda\_location\_11\_30\_error\_independent\_FALSE\_x\_missing\_location\_8.Rdata\_ror_independent\_FALSE\_x\_missing\_location\_8.Rdata\_ror_independent_ror_independent_ror_independe$ table\_original

	$^{\mathrm{rho}}$	$\mathbf{r}_{-}\mathbf{s}\mathbf{d}$	$L\_\inf$	$L_{\rm sd}$	$\Gamma_{-1}$	$L_1_sd$	$L_2$	$L_2$ sd	tn0e0	t0en0	$\rm tn0e0\_sd$	$t0en0\_sd$
FLASSO 0	0	0	0.143	0.048	0.371	0.176	0.195	0.068	0.00	2.09	0.000	1.54
FSCAD	0	0	0.129	0.064	0.286	0.201	0.166	0.090	0.00	0.86	0.000	1.239
FMCP	0	0	0.131	0.059	0.298	0.213	0.172	0.089	0.00	0.71	0.000	1.37
CLASSO	0	0	0.258	0.092	0.658	0.245	0.347	0.107	0.00	2.27	0.000	1.448
CSCAD	0	0	0.229	0.099	0.537	0.282	0.301	0.130	0.01	1.35	0.100	1.39
CMCP	0	0	0.234	0.104	0.560	0.322	0.312	0.139	0.04	1.07	0.197	1.46
PLASSO	0	0	0.630	0.350	1.471	0.627	0.805	0.405	0.00	3.64	0.000	1.08
PSCAD1	0	0	0.539	0.311	1.137	0.000	0.684	0.379	0.02	0.87	0.141	1.16
PSCAD2	0	0	0.547	0.324	1.175	0.679	0.699	0.395	0.02	0.88	0.141	1.14
PSCAD3	0	0	0.559	0.331	1.223	0.704	0.719	0.405	0.03	0.87	0.171	1.14
PMCP1	0	0	0.551	0.324	1.161	0.684	0.698	0.396	0.04	0.85	0.197	1.14
PMCP2	0	0	0.545	0.314	1.163	0.648	0.696	0.381	0.02	0.74	0.141	1.00
PMCP3	0	0	0.568	0.338	1.204	0.690	0.722	0.408	0.04	0.74	0.197	0.96

intercept: 0

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: TRUE

missing\_method: xy

missing\_location: 1

 $lambda\_location\_for\_cv(SCAD): 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $file\_name: ./data/beta\_3\_2\_0.5\_n\_200\_lambda\_location\_11\_30\_error\_independent\_TRUE\_x\_missing\_location\_1.Rdata\_location\_2.Rdata\_location\_2.Rdata\_location\_2.Rdata\_location\_2.Rdata\_location\_3.Rda$ table\_original

	rho	$r_sd$	$L_{-}$ inf	$\Gamma_{\rm sd}$	$\Gamma_{-1}$	$L_1_sd$	$L_2$	$L_2$ sd	tn0e0	t0en0	$tn0e0\_sd$	$t0en0\_sd$
FLASSO	0	0	0.126	0.039	0.345	0.130	0.174		0	2.67	0	1.528
FSCAD	0	0	0.103	0.045	0.225	0.133	0.132	0	0	0.84	0	1.261
FMCP	0	0	0.106	0.051	0.235	0.157	0.137		0	0.75	0	1.438
CLASSO	0	0	0.221	0.096	0.538	0.196	0.288		0	2.50	0	1.50
CSCAD	0	0	0.178	0.075	0.373	0.206	0.220		0	1.28	0	1.50!
CMCP	0	0	0.176	0.074	0.344	0.169	0.214		0	0.57	0	1.018
PLASSO	0	0	0.533	0.316	1.230	0.540	0.675		0	4.17	0	0.87
PSCAD1	0	0	0.474	0.328	0.960	0.662	0.585		0	0.88	0	1.20(
PSCAD2	0	0	0.490	0.350	0.997	0.707	0.606		0	0.71	0	0.99
PSCAD3	0	0	0.491	0.345	1.003	0.702	0.608		0	0.69	0	0.97
PMCP1	0	0	0.475	0.332	0.956	0.668	0.585		0	0.76	0	1.06
PMCP2	0	0	0.481	0.338	0.977	0.676	0.594		0	0.73	0	0.99
PMCP3	С	0	0.499	0.369	1.029	0.735	0.690		C	0.77	C	1 03

intercept: 0

sample size: 200

simulation time: 100

loss\_rate: 0.625

error\_independent: TRUE

missing\_method: xy

missing\_location: 3

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $file\_name: ./data/beta\_3\_2\_0.5\_n\_200\_lambda\_location\_11\_30\_error\_independent\_TRUE\_x\_missing\_location\_3.Rdata\_location\_3.Rda$ table\_original

	$^{\mathrm{rho}}$	$\mathbf{r}_{-}\mathbf{sd}$	$L_{-}$ inf	$L_{\rm sd}$	$\Gamma_{-1}$	$L_1_sd$	$L_{-}^{2}$	$L_2_{ m sd}$	tn0e0	t0en0	$\rm tn0e0\_sd$	$t0en0\_sd$
FLASSO	0	0	0.129	0.048	0.337	0.130	0.175	0.054	0.00	2.54	0.000	1.410
FSCAD	0	0	0.107	0.049	0.237	0.152	0.137	0.065	0.00	0.98	0.000	1.504
FMCP	0	0	0.107	0.048	0.235	0.150	0.137	0.065	0.00	0.74	0.000	1.397
CLASSO	0	0	0.270	0.096	0.690	0.204	0.364	0.105	0.01	2.58	0.100	1.558
CSCAD	0	0	0.274	0.126	0.527	0.201	0.331	0.123	0.16	1.09	0.368	1.364
$_{ m CMCP}$	0	0	0.252	0.120	0.515	0.224	0.313	0.123	0.13	0.93	0.338	1.380
PLASSO	0	0	0.611	0.299	1.451	0.556	0.788	0.350	0.00	4.06	0.000	1.062
PSCAD1	0	0	0.545	0.355	1.212	0.787	0.714	0.461	0.22	0.97	0.416	1.218
PSCAD2	0	0	0.549	0.373	1.209	0.837	0.717	0.485	0.21	0.78	0.409	1.011
PSCAD3	0	0	0.549	0.373	1.224	0.815	0.720	0.478	0.20	0.83	0.402	1.035
PMCP1	0	0	0.544	0.350	1.208	0.771	0.713	0.455	0.23	0.88	0.423	1.157
PMCP2	0	0	0.540	0.381	1.204	0.850	0.707	0.495	0.18	0.85	0.386	1.048
PMCP3	0	0	0.546	0.381	1.223	0.834	0.717	0.487	0.19	0.83	0.394	0.985

intercept: 0

sample size: 200

simulation time: 100

loss\_rate: 0.625

error\_independent: TRUE

missing\_method: xy

missing\_location: 8

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $file\_name: ./data/beta\_3\_2\_0.5\_n\_200\_lambda\_location\_11\_30\_error\_independent\_TRUE\_x\_missing\_location\_8.Rdata\_location\_8.Rda$ table\_original

	rho	r_sd	L_inf	$L_{-}sd$	$L_{-1}$	$L_1$ sd	$L_{-}^{2}$	$L_2$ sd	tn0e0	t0en0	tn0e0_sd	t0en0_sd
FLASSO	0	0	0.133	0.051	0.336	0.118	0.178	0.057	0.00	2.37	0.000	1.509
FSCAD	0	0	0.102	0.052	0.214	0.118	0.129	0.062	0.00	0.74	0.000	1.194
FMCP	0	0	0.104	0.047	0.213	0.120	0.130	0.060	0.00	0.56	0.000	1.076
CLASSO	0	0	0.274	0.091	0.717	0.213	0.371	0.105	0.00	2.73	0.000	1.462
CSCAD	0	0	0.209	0.100	0.442	0.226	0.263	0.119	0.01	1.12	0.100	1.241
$_{ m CMCP}$	0	0	0.213	0.100	0.459	0.248	0.271	0.120	0.02	0.93	0.141	1.358
PLASSO	0	0	0.652	0.348	1.510	0.633	0.831	0.401	0.00	3.73	0.000	1.072
PSCAD1	0	0	0.487	0.386	1.024	0.820	0.611	0.464	0.04	0.77	0.197	1.213
PSCAD2	0	0	0.482	0.393	1.006	0.834	0.603	0.471	0.02	0.71	0.141	1.131
PSCAD3	0	0	0.497	0.400	1.056	0.859	0.625	0.481	0.01	0.77	0.100	1.136
PMCP1	0	0	0.484	0.381	1.016	0.819	0.606	0.459	0.03	0.74	0.171	1.169
PMCP2	0	0	0.486	0.395	1.025	0.848	0.610	0.474	0.02	0.70	0.141	1.078
PMCP3	0	0	0.508	0.408	1.072	0.870	0.637	0.492	0.02	0.77	0.141	1.127

intercept: 0

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: FALSE

missing\_method: xy

missing\_location: 1

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

file\_name: ./data/beta\_3\_2\_1\_n\_200\_lambda\_location\_l1\_30\_error\_independent\_FALSE\_x\_missing\_location\_1.Rdata table\_original

	rho	r_sd	L_inf	L_sd	$L_{-1}$	$L_1$ sd	$L_2$	$L_2$ sd	tn0e0	t0en0	$tn0e0\_sd$	$t0en0\_sd$
FLASSO	0	0	0.136	0.053	0.322	0.151	0.179	0.068	0	1.53	0	1.314
FSCAD	0	0	0.122	0.055	0.252	0.151	0.155	0.076	0	0.37	0	0.971
FMCP	0	0	0.120	0.056	0.242	0.148	0.151	0.077	0	0.19	0	0.526
CLASSO	0	0	0.204	0.088	0.508	0.240	0.274	0.110	0	1.86	0	1.608
CSCAD	0	0	0.169	0.084	0.345	0.218	0.213	0.112	0	0.25	0	0.809
$_{ m CMCP}$	0	0	0.174	0.085	0.374	0.255	0.224	0.119	0	0.40	0	1.146
PLASSO	0	0	0.586	0.351	1.401	0.680	0.756	0.413	0	3.85	0	1.114
PSCAD1	0	0	0.493	0.328	1.018	0.735	0.615	0.412	0	0.50	0	0.905
PSCAD2	0	0	0.502	0.343	1.034	0.749	0.625	0.426	0	0.54	0	0.937
PSCAD3	0	0	0.498	0.333	1.032	0.741	0.622	0.416	0	0.54	0	0.881
PMCP1	0	0	0.503	0.333	1.031	0.734	0.626	0.415	0	0.49	0	0.893
PMCP2	0	0	0.509	0.337	1.060	0.753	0.636	0.422	0	0.57	0	0.902
PMCP3	С	0	0.520	0.345	1.090	0.753	0.651	0.427	0	0.57	0	0.868

intercept: 0

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: FALSE

missing\_method: xy

missing\_location: 3

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

file\_name: ./data/beta\_3\_2\_1\_n\_200\_lambda\_location\_l1\_30\_error\_independent\_FALSE\_x\_missing\_location\_3.Rdata table\_original

	rho	r_sd	L_inf	L_sd	$\Gamma_{-1}$	$L_1$ sd	$L_2$	$L_2$ sd	tn0e0	t0en0	tn0e0_sd	$t0en0\_sd$
FLASSO	0	0	0.138	0.055	0.355	0.167	0.187	0.071	0	2.14	0	1.524
FSCAD	0	0	0.124	0.063	0.265	0.191	0.158	0.088	0	0.56	0	1.149
FMCP	0	0	0.124	0.063	0.270	0.212	0.159	0.093	0	0.50	0	1.275
CLASSO	0	0	0.231	0.092	0.563	0.246	0.306	0.111	0	1.93	0	1.628
CSCAD	0	0	0.186	0.091	0.405	0.272	0.239	0.127	0	0.73	0	1.21
CMCP	0	0	0.186	0.091	0.377	0.231	0.232	0.118	0	0.46	0	1.039
PLASSO	0	0	0.615	0.320	1.562	0.060	0.821	0.385	0	3.85	0	1.029
PSCAD1	0	0	0.476	0.283	1.028	0.698	0.611	0.370	0	0.73	0	1.188
PSCAD2	0	0	0.469	0.298	1.026	0.724	0.603	0.389	0	0.71	0	0.977
PSCAD3	0	0	0.466	0.295	1.022	0.720	0.600	0.384	0	0.72	0	1.01
PMCP1	0	0	0.472	0.281	1.020	0.693	0.606	0.369	0	0.74	0	1.151
PMCP2	0	0	0.474	0.292	1.040	0.711	0.610	0.381	0	0.75	0	1.029
PMCP3	0	С	0.464	0.296	1.017	0.710	0.596	0.382	С	0.74	C	0.96

intercept: 0

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: FALSE

missing\_method: xy

missing\_location: 8

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

	rho	r_sd	L_inf	L_sd	$L_{-}1$	$L_1_sd$	$L_2$	$L_2$ sd	tn0e0	t0en0	tn0e0_sd	t0en0_sd
FLASSO	0	0	0.137	0.047	0.366	0.174	0.189	0.067	0	2.21	0	1.559
FSCAD	0	0	0.121	0.058	0.256	0.166	0.153	0.075	0	0.64	0	1.251
$_{ m FMCP}$	0	0	0.120	0.059	0.265	0.197	0.156	0.085	0	0.50	0	1.251
CLASSO	0	0	0.245	0.077	0.642	0.248	0.332	0.098	0	2.49	0	1.494
CSCAD	0	0	0.201	0.080	0.420	0.237	0.251	0.106	0	0.77	0	1.332
$_{ m CMCP}$	0	0	0.205	0.080	0.399	0.211	0.249	0.103	0	0.43	0	0.977
PLASSO	0	0	0.664	0.358	1.639	0.668	0.873	0.423	0	3.70	0	1.096
PSCAD1	0	0	0.479	0.305	1.067	0.694	0.627	0.388	0	0.64	0	1.185
PSCAD2	0	0	0.495	0.316	1.113	0.733	0.648	0.404	0	0.70	0	1.142
PSCAD3	0	0	0.509	0.341	1.156	0.765	0.671	0.429	0	0.72	0	1.111
PMCP1	0	0	0.480	0.303	1.073	0.689	0.628	0.385	0	0.67	0	1.181
PMCP2	0	0	0.492	0.315	1.113	0.732	0.648	0.401	0	0.69	0	1.080
PMCP3	С	0	0.504	0.326	1.161	0.759	0.668	0.419	0	0.74	0	1.041

intercept: 0

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: TRUE

missing\_method: xy

missing\_location: 1

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

file\_name: ./data/beta\_3\_2\_1\_n\_200\_lambda\_location\_l1\_30\_error\_independent\_TRUE\_x\_missing\_location\_1.Rdata

	rho	r_sd	L_inf	$L_{\rm sd}$	$\Gamma_{-1}$	$L_{-1}$ sd	$L_{-}2$	$L_2$ sd	tn0e0	t0en0	tn0e0_sd	$t0en0\_sd$
FLASSO	0	0	0.134	0.052	0.363	0.145	0.185	0.062	0	2.68	0	1.601
FSCAD	0	0	0.113	0.051	0.243	0.155	0.143	0.066	0	0.80	0	1.504
FMCP	0	0	0.114	0.053	0.241	0.161	0.143	0.070	0	0.68	0	1.503
CLASSO	0	0	0.213	0.077	0.579	0.188	0.296	0.096	0	2.70	0	1.605
CSCAD	0	0	0.151	0.073	0.330	0.189	0.196	0.094	0	0.62	0	1.285
CMCP	0	0	0.149	0.071	0.312	0.174	0.191	0.090	0	0.43	0	1.008
PLASSO	0	0	0.618	0.316	1.492	0.625	0.792	0.380	0	4.08	0	0.992
PSCAD1	0	0	0.436	0.266	0.984	0.669	0.567	0.349	0	0.84	0	1.293
PSCAD2	0	0	0.442	0.275	1.006	0.678	0.575	0.359	0	0.89	0	1.214
PSCAD3	0	0	0.463	0.288	1.066	0.727	0.606	0.381	0	0.86	0	1.137
PMCP1	0	0	0.441	0.277	0.995	0.688	0.572	0.358	0	0.84	0	1.261
PMCP2	0	0	0.453	0.284	1.048	0.718	0.592	0.371	0	0.94	0	1.213
PMCP3	C	0	0.450	0.281	1.046	0.723	0.590	0.372	С	06.0	С	1.124

intercept: 0

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: TRUE

missing\_method: xy

missing\_location: 3

 $lambda\_location\_for\_cv(SCAD) : 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

file\_name: ./data/beta\_3\_2\_1\_n\_200\_lambda\_location\_l1\_30\_error\_independent\_TRUE\_x\_missing\_location\_3.Rdata table\_original

	rho	r_sd	L_inf	L_sd	$L_{-1}$	$L_{-}1_{-}\mathrm{sd}$	$L_2$	$L_2$ sd	tn0e0	t0en0	tn0e0_sd	$t0en0\_sd$
FLASSO	0	0	0.125	0.043	0.343	0.128	0.173	0.053	0	2.65	0	1.540
FSCAD	0	0	0.106	0.043	0.237	0.150	0.136	0.061	0	0.84	0	1.468
FMCP	0	0	0.104	0.041	0.218	0.131	0.131	0.057	0	0.46	0	1.114
CLASSO	0	0	0.257	0.081	0.669	0.188	0.349	0.097	0	2.66	0	1.591
CSCAD	0	0	0.188	0.070	0.382	0.166	0.234	0.086	0	0.73	0	1.127
CMCP	0	0	0.193	0.079	0.392	0.195	0.241	0.096	0	0.57	0	1.148
PLASSO	0	0	0.620	0.311	1.513	0.620	0.809	0.382	0	3.95	0	1.08
PSCAD1	0	0	0.430	0.237	0.943	0.563	0.556	0.308	0	0.74	0	1.194
PSCAD2	0	0	0.431	0.257	0.952	0.614	0.559	0.338	0	0.59	0	0.96
PSCAD3	0	0	0.441	0.274	0.981	0.644	0.574	0.360	0	0.63	0	0.89
PMCP1	0	0	0.422	0.239	0.928	0.563	0.546	0.308	0	0.69	0	1.08
PMCP2	0	0	0.438	0.259	0.962	0.611	0.567	0.338	0	0.61	0	0.952
PMCP3	С	0	0.434	0.263	0.973	0.634	0.568	0.349	С	0.70	C	0.927

intercept: 0

sample size: 200

simulation time: 100

 $loss\_rate:\ 0.625$ 

error\_independent: TRUE

missing\_method: xy

missing\_location: 8

 $lambda\_location\_for\_cv(SCAD): 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

 $lambda\_location\_for\_cv(MCP); 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12\ 13\ 14\ 15\ 16\ 17\ 18\ 19\ 20\ 21\ 22\ 23\ 24\ 25\ 26\ 27\ 28\ 29\ 30$ 

file\_name: ./data/beta\_3\_2\_1\_n\_200\_lambda\_location\_l1\_30\_error\_independent\_TRUE\_x\_missing\_location\_8.Rdata table\_original

	$^{\mathrm{rho}}$	$\mathbf{r}_{-}\mathbf{sd}$	$\mathrm{L\_inf}$	$L_{\rm sd}$	$L_{-1}$	$L\_1\_\mathrm{sd}$	$L_{-}^{2}$	$L_2$ sd	tn0e0	t0en0	$\rm tn0e0\_sd$	$t0en0\_sd$
FLASSO	0	0	0.128	0.043	0.328	0.127	0.173	0.052	0	2.24	0	1.450
FSCAD	0	0	0.103	0.042	0.222	0.141	0.131	0.059	0	0.69	0	1.285
FMCP	0	0	0.103	0.042	0.216	0.132	0.130	0.058	0	0.53	0	1.159
CLASSO	0	0	0.265	0.087	0.717	0.226	0.368	0.108	0	2.69	0	1.555
CSCAD	0	0	0.188	0.083	0.397	0.216	0.239	0.108	0	0.56	0	1.057
CMCP	0	0	0.187	0.082	0.394	0.229	0.238	0.110	0	0.46	0	0.999
PLASSO	0	0	0.656	0.337	1.582	0.657	0.851	0.404	0	3.85	0	1.038
PSCAD1	0	0	0.474	0.319	1.049	0.704	0.614	0.394	0	0.73	0	1.213
PSCAD2	0	0	0.504	0.340	1.131	0.741	0.658	0.418	0	0.80	0	1.137
PSCAD3	0	0	0.486	0.355	1.093	0.787	0.632	0.438	0	0.80	0	1.064
PMCP1	0	0	0.465	0.321	1.034	0.708	0.603	0.395	0	0.71	0	1.192
PMCP2	0	0	0.499	0.349	1.118	0.750	0.649	0.426	0	0.80	0	1.101
PMCP3	0	0	0.488	0.336	1.108	0.727	0.637	0.412	С	0.84	0	1.042