1 Numerical Result

Table 1: Variable Selection Results for Example 1 $(\beta=(3,2,1.5,0,0,0,0,0)')$

Method	CFR (%)	OFR (%)	AN	TIME	CFR (%)	OFR (%)	AN	TIME	
	Case A					Case B			
ALasso	74	23	3.29	0.9	63	25	3.25	0.97	
sLTS	8	91	4.96	4.03	28	72	4.07	3.82	
MMNNG	68	25	3.25	691.33	88	12	3.13	682.07	
SROS	19	78	4.34	49.36	30	70	4.12	53.2	
PAWLS	77	14	3.09	2.26	89	11	3.13	2.18	
Case C						Case D			
ALasso	3	2	1.94	0.85	0	19	2.52	1.19	
sLTS	7	93	5.21	5.45	11	89	5.05	5.91	
MMNNG	72	12	2.95	673.93	63	16	3.25	682.47	
SROS	50	42	3.57	49.32	3	84	4.9	49.3	
PAWLS	75	16	3.11	2.03	75	12	3.16	2.99	
Case E									
ALasso	0	17	4.05	0.98					
sLTS	9	91	4.98	5.67					
MMNNG	59	22	3.07	685.49					
PAWLS	63	24	3.2	2.91					

Table 2: Variable Selection Results for Example 2 $(\beta=(3,2,1.5,0,0,0,0,0)')$

Method	CFR (%)	OFR (%)	AN	TIME	CFR (%)	OFR (%)	AN	TIME		
Case A						Case B				
ALasso	97	0	9.96	3.4	84	1	9.75	3.41		
sLTS	0	78	31.9	1702.93	1	86	24.93	1630.7		
PAWLS	57	10	7.65	46.3	51	5	6.23	47.26		
Case C						Case D				
ALasso	0	0	6.25	4.07	0	1	6.89	4.07		
sLTS	0	91	32.11	1942.99	0	92	31.98	1870.57		
PAWLS	63	7	8.17	64.14	40	27	9.37	63.85		
Case E										
ALasso	0	0	12.18	4.06						
sLTS	0	92	30.96	1830.16						
PAWLS	10	7	9.24	85.2						

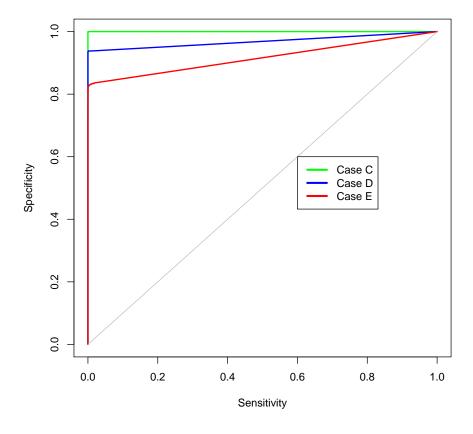
Table 3: Outlier Detection Evaluation in Example 1 and 2 $\,$

			sLTS			PAWLS	
	Model	M (%)	S (%)	$\mathrm{JD}(\%)$	M (%)	S (%)	$\mathrm{JD}(\%)$
	Case A	0	0.06	1	0	0.02	1
Evennela 1	Case B	0	0.09	1	0	0.06	1
Example 1	Case C	0	0.02	1	0	0.01	1
	Case D	0	0.02	1	0.06	0.01	0.9
	Case E	0.06	0.03	0.74	0.16	0.02	0.43
	Case A	0	0.21	1	0	0.19	1
Example 2	Case B	0	0.16	1	0	0.3	1
	Case C	0	0.13	0.99	0.02	0.16	0.86
	Case D	0	0.14	0.99	0.19	0.11	0.62
	Case E	0.08	0.12	0.42	0.5	0.09	0.01

Table 4: Outlier Detection Evaluation in Example 1 $\,$

			IPOD			PAWLS	
	Model	M (%)	S (%)	$\mathrm{JD}(\%)$	M (%)	S (%)	$\mathrm{JD}(\%)$
	Case A	0	0	1	0	0.02	1
Example 1	Case B	0	0.1	1	0	0.06	1
	Case C	0	0.08	1	0	0.01	1
	Case D	0.49	0.02	0.07	0.06	0.01	0.9
	Case E	0.22	0.05	0.31	0.16	0.02	0.43

ROC Curve for example 1



ROC Curve for example 2

