

Simulation Tables

Carter Allen

Table 1: Model results for simulated data with $n = 1000$, $k = 4$, $p = 2$, $h = 3$, $r = 2$. 1000 iterations were run with a burn in of 250. Missingness mechanism was MAR and $P(\text{miss}) = 0$

Model Component	Parameter	Class 1		Class 2		Class 3	
		True	Est. (95% CrI)	True	Est. (95% CrI)	True	Est. (95% CrI)
MVSN Regression	β_{11}	100	100.8 (100.25, 101.4)	90	89.32 (88.8, 89.86)	100	100.09 (99.69, 100.51)
	β_{21}	-1	-0.87 (-1.18, -0.58)	1	0.63 (0.38, 0.88)	1	0.81 (0.6, 1.04)
	β_{31}	105	106.73 (106.12, 107.35)	85	83.31 (82.73, 83.89)	100	100.7 (100.19, 101.2)
	β_{41}	-1.5	-1.56 (-1.88, -1.26)	1.5	1.29 (0.99, 1.58)	1	0.68 (0.43, 0.94)
	β_{12}	110	112.36 (111.73, 113.05)	80	77.59 (76.94, 78.26)	100	99.98 (99.49, 100.5)
	β_{22}	-2	-2.05 (-2.41, -1.7)	2	2.02 (1.66, 2.35)	1	0.65 (0.39, 0.89)
	β_{32}	115	117.92 (117.09, 118.72)	75	71.91 (71.22, 72.58)	100	100.78 (100.33, 101.27)
	β_{42}	-2.5	-2.55 (-2.93, -2.14)	2.5	2.39 (2.03, 2.73)	1	0.71 (0.47, 0.95)
	Ω_{11}	6	5.6 (4.82, 6.59)	6	5.46 (4.79, 6.32)	5	4.05 (3.51, 4.68)
	Ω_{12}	4.5	2.9 (2.2, 3.72)	4.5	3.67 (2.97, 4.51)	2.5	1.95 (1.48, 2.51)
	Ω_{13}	4.25	2.58 (1.79, 3.48)	4.25	2.87 (2.19, 3.62)	1.25	0.72 (0.25, 1.21)
	Ω_{14}	4.62	2.62 (1.68, 3.68)	4.62	2.06 (1.31, 2.89)	0.62	0.13 (-0.31, 0.6)
	Ω_{22}	9	6.52 (5.62, 7.7)	9	6.94 (5.98, 8.05)	6	5.39 (4.66, 6.19)
	Ω_{23}	8.5	4.83 (3.88, 5.96)	8.5	5.5 (4.65, 6.54)	2.5	2.51 (1.97, 3.15)
	Ω_{24}	9.25	4.57 (3.43, 5.85)	9.25	3.96 (3.06, 4.94)	2.25	1.59 (1.08, 2.16)
	Ω_{33}	14	8.21 (7.01, 9.87)	14	8.72 (7.57, 9.95)	5	5.14 (4.41, 5.91)
	Ω_{34}	14.5	7.17 (5.88, 8.81)	14.5	6.25 (5.2, 7.52)	2.5	2.49 (1.93, 3.14)
	Ω_{44}	21	11.22 (9.46, 13.38)	21	9.78 (8.46, 11.47)	6	4.7 (4.08, 5.43)
	α_1	0	0 (0, 0)	0	0 (0, 0)	-0.24	0 (0, 0)
	α_2	0.19	0 (0, 0)	-0.19	0 (0, 0)	0.65	0 (0, 0)
	α_3	0.35	0 (0, 0)	-0.35	0 (0, 0)	-0.47	0 (0, 0)
	α_4	1.43	0 (0, 0)	-1.43	0 (0, 0)	0.52	0 (0, 0)
Multinom.	δ_{11}	0.32	0.3 (0.1, 0.5)	0.32	0.3 (0.1, 0.5)	0.32	0.3 (0.1, 0.5)
	δ_{12}	-0.23	-0.26 (-0.55, 0.03)	-0.23	-0.26 (-0.55, 0.03)	-0.23	-0.26 (-0.55, 0.03)
	δ_{21}	0.47	0.2 (-0.02, 0.41)	0.47	0.2 (-0.02, 0.41)	0.47	0.2 (-0.02, 0.41)
	δ_{22}	-0.27	0.07 (-0.21, 0.35)	-0.27	0.07 (-0.21, 0.35)	-0.27	0.07 (-0.21, 0.35)
Clustering	π_l	0.29	0.29 (0.29, 0.3)	0.34	0.34 (0.34, 0.34)	0.36	0.36 (0.36, 0.36)