

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}	-4.88	-5.5 (-6.05, -4.96)	-0.36	-0.09 (-0.61, 0.79)	2.92	2.13 (0.87, 2.87)
	β_{21}	-2.13	-2.08 (-2.25, -1.92)	0.29	0.24 (0.09, 0.36)	2.15	2.17 (1.94, 2.41)
	β_{31}	-2.66	-3.17 (-3.73, -2.46)	0.39	0.72 (0.04, 1.49)	3.1	2.28 (0.93, 3.09)
	β_{41}	-2.75	-2.81 (-2.95, -2.65)	-0.31	-0.3 (-0.44, -0.17)	2.72	2.74 (2.45, 3)
	β_{12}	-2.67	-3.09 (-3.67, -2.64)	-0.36	0.24 (-0.57, 1.07)	2.5	1.63 (0.13, 2.28)
	β_{22}	-2.79	-2.85 (-2.98, -2.69)	0.32	0.41 (0.26, 0.56)	3.09	3.17 (2.91, 3.41)
	β_{32}	-1.92	-2.55 (-3.08, -1.81)	0.22	0.66 (-0.01, 1.49)	2.31	1.81 (0.32, 2.37)
	β_{42}	-2.84	-2.93 (-3.07, -2.77)	-0.1	-0.06 (-0.23, 0.1)	2.73	2.73 (2.48, 2.98)
	σ_{11}	1	1.54 (1.24, 1.92)	1	1.37 (0.98, 1.7)	1	2.52 (1.45, 3.65)
	σ_{12}	0.5	1.01 (0.71, 1.32)	0.5	0.91 (0.51, 1.21)	0.5	2.13 (1.02, 3.36)
	σ_{13}	0.25	0.77 (0.56, 1.05)	0.25	0.68 (0.31, 0.95)	0.25	1.7 (0.78, 2.93)
	σ_{14}	0.12	0.61 (0.39, 0.87)	0.12	0.57 (0.25, 0.85)	0.12	1.33 (0.49, 2.55)
	σ_{22}	1	1.41 (0.94, 1.76)	1	1.26 (0.73, 1.63)	1	2.88 (1.68, 4.32)
	σ_{23}	0.5	0.96 (0.72, 1.25)	0.5	0.84 (0.38, 1.14)	0.5	2.23 (1.18, 3.54)
	σ_{24}	0.25	0.76 (0.51, 1.02)	0.25	0.62 (0.22, 0.92)	0.25	1.82 (0.82, 3.05)
	σ_{33}	1	1.31 (1.08, 1.62)	1	1.3 (0.9, 1.66)	1	2.81 (1.76, 4.17)
	σ_{34}	0.5	0.86 (0.61, 1.13)	0.5	0.87 (0.51, 1.19)	0.5	1.99 (1.08, 3.29)
	σ_{44}	1	1.38 (0.97, 1.68)	1	1.45 (1.1, 1.84)	1	2.04 (1.15, 3.47)
	ψ_1	-1	-0.21 (-0.87, 0.41)	1	0.57 (-0.47, 1.26)	-2.33	-1.36 (-2.2, 0.12)
	ψ_2	-1	-0.3 (-1.29, 0.34)	1	0.51 (-0.5, 1.38)	-2.33	-1.43 (-2.24, 0.17)
	ψ_3	-1	-0.45 (-0.93, 0.34)	1	0.26 (-0.68, 1.29)	-2.33	-1.4 (-2.11, 0.47)
	ψ_4	-1	-0.23 (-1.14, 0.41)	1	0.41 (-0.62, 1.22)	-2.33	-1.67 (-2.38, 0.09)
Multinom.	δ_{11}	0.05	0.17 (-0.02, 0.36)	0.05	0.17 (-0.02, 0.36)	0.05	0.17 (-0.02, 0.36)
	δ_{12}	0.62	0.56 (0.25, 0.84)	0.62	0.56 (0.25, 0.84)	0.62	0.56 (0.25, 0.84)
	δ_{21}	-0.75	-0.55 (-0.78, -0.32)	-0.75	-0.55 (-0.78, -0.32)	-0.75	-0.55 (-0.78, -0.32)
	δ_{22}	0.83	0.88 (0.53, 1.19)	0.83	0.88 (0.53, 1.19)	0.83	0.88 (0.53, 1.19)
Clustering	π_l	0.3	0.3 (0.29, 0.31)	0.45	0.43 (0.4, 0.46)	0.26	0.27 (0.25, 0.31)