

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}	-3.07	-2.7 (-3.27, -2.34)	0.42	0.9 (-0.06, 1.7)	2.46	2.23 (1.75, 2.56)
	β_{21}	-2.04	-1.99 (-2.17, -1.82)	-0.31	-0.26 (-0.44, -0.02)	3.26	3.27 (3.16, 3.38)
	β_{31}	-3.03	-3.14 (-3.55, -2.77)	0.34	0.49 (-0.41, 1.35)	2.93	2.77 (2.05, 3.09)
	β_{41}	-3.26	-3.24 (-3.4, -3.07)	-0.63	-0.59 (-0.77, -0.38)	2.53	2.54 (2.43, 2.65)
	β_{12}	-3.12	-3.48 (-3.88, -2.82)	0.09	0.51 (-0.32, 1.27)	2.67	2.22 (1.4, 2.57)
	β_{22}	-2.61	-2.62 (-2.77, -2.48)	-0.37	-0.35 (-0.52, -0.15)	2.1	2.07 (1.96, 2.18)
	β_{32}	-2.84	-2.8 (-3.4, -2.36)	-0.06	0.24 (-0.71, 1.12)	1.89	1.57 (1.07, 1.87)
	β_{42}	-2.8	-2.62 (-2.79, -2.48)	0.09	0.14 (-0.06, 0.34)	3.38	3.35 (3.24, 3.45)
	σ_{11}	1	1.13 (0.79, 1.63)	1	1.13 (0.63, 4.43)	1	1.27 (0.88, 1.76)
	σ_{12}	0.5	0.73 (0.46, 1.09)	0.5	0.58 (0.21, 3.5)	0.5	0.8 (0.48, 1.42)
	σ_{13}	0.25	0.47 (0.21, 0.71)	0.25	0.29 (-0.01, 2.68)	0.25	0.59 (0.32, 1.09)
	σ_{14}	0.12	0.21 (-0.04, 0.54)	0.12	0.06 (-0.2, 2.72)	0.12	0.32 (0.08, 0.76)
	σ_{22}	1	1.3 (1.03, 1.65)	1	0.98 (0.53, 3.36)	1	1.21 (0.91, 1.88)
	σ_{23}	0.5	0.73 (0.52, 1)	0.5	0.58 (0.26, 2.72)	0.5	0.85 (0.57, 1.36)
	σ_{24}	0.25	0.52 (0.31, 0.82)	0.25	0.16 (-0.17, 2.34)	0.25	0.5 (0.25, 1.02)
	σ_{33}	1	1.03 (0.78, 1.31)	1	0.87 (0.5, 2.88)	1	1.43 (1.12, 1.81)
	σ_{34}	0.5	0.68 (0.48, 0.92)	0.5	0.36 (0.04, 2.38)	0.5	0.84 (0.61, 1.29)
	σ_{44}	1	1.1 (0.75, 1.45)	1	0.83 (0.45, 3.03)	1	1.21 (0.93, 1.63)
	ψ_1	-0.67	-0.92 (-1.34, -0.19)	0.33	-0.14 (-1.17, 0.97)	-1.33	-1.19 (-1.58, -0.62)
	ψ_2	-0.67	-0.39 (-0.81, 0.09)	0.33	0.14 (-0.93, 1.1)	-1.33	-1.21 (-1.57, -0.38)
	ψ_3	-0.67	0 (-0.83, 0.45)	0.33	-0.21 (-1.09, 0.75)	-1.33	-0.87 (-1.33, 0.11)
	ψ_4	-0.67	-0.68 (-1.18, 0.09)	0.33	-0.08 (-1.19, 1.03)	-1.33	-1.07 (-1.39, -0.5)
Multinom.	δ_{11}	-0.5	-0.29 (-0.54, -0.05)	-0.5	-0.29 (-0.54, -0.05)	-0.5	-0.29 (-0.54, -0.05)
	δ_{12}	0.33	0.12 (-0.24, 0.48)	0.33	0.12 (-0.24, 0.48)	0.33	0.12 (-0.24, 0.48)
	δ_{21}	0.36	0.33 (0.12, 0.53)	0.36	0.33 (0.12, 0.53)	0.36	0.33 (0.12, 0.53)
	δ_{22}	0.96	0.98 (0.69, 1.28)	0.96	0.98 (0.69, 1.28)	0.96	0.98 (0.69, 1.28)
Clustering	π_l	0.25	0.25 (0.22, 0.27)	0.19	0.18 (0.15, 0.21)	0.56	0.57 (0.55, 0.59)