

# 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	$\beta_{11}$	-3.32	-3.06 (-3.97, -2.01)	0.48	0.84 (-0.46, 1.99)	2.67	1.58 (0.81, 2.34)
	$\beta_{21}$	-2.77	-2.85 (-3.41, -2.24)	0.52	0.6 (-0.18, 1.29)	3.59	3.24 (2.88, 3.53)
	$\beta_{31}$	-3.15	-3.11 (-4.19, -2.17)	0.88	1.01 (-0.33, 2.29)	2.36	1.21 (0.34, 1.92)
	$\beta_{41}$	-2.36	-2.24 (-2.79, -1.65)	-0.29	-0.31 (-1.13, 0.41)	3.27	2.98 (2.65, 3.29)
	$\beta_{12}$	-3.02	-2.94 (-4.23, -1.89)	-0.74	-0.19 (-1.43, 1.26)	3.62	2.42 (1.56, 3.87)
	$\beta_{22}$	-2.98	-2.97 (-3.66, -2.21)	-0.56	-0.4 (-1.19, 0.31)	2.42	2.26 (1.9, 2.67)
	$\beta_{32}$	-3	-2.86 (-4.11, -1.82)	0.13	0.6 (-0.79, 1.7)	3.16	1.92 (1.23, 2.54)
	$\beta_{42}$	-4.02	-3.76 (-4.36, -3.25)	0.01	-0.1 (-0.8, 0.67)	3.48	3.26 (2.95, 3.64)
	$\sigma_{11}$	1	1.48 (0.85, 2.78)	1	1.46 (0.56, 3.75)	1	1.12 (0.76, 1.71)
	$\sigma_{12}$	0.57	1.3 (0.75, 2.84)	0.14	1.14 (0.33, 3.42)	0.79	0.94 (0.58, 1.5)
	$\sigma_{13}$	0.68	1.5 (0.87, 3.16)	0.25	0.76 (0.02, 3.03)	-0.03	0.42 (0, 1.08)
	$\sigma_{14}$	0.3	1.23 (0.64, 2.13)	0.61	1.02 (0.2, 3.18)	0.36	0.7 (0.32, 1.17)
	$\sigma_{22}$	1	1.9 (1.08, 3.35)	1	1.8 (0.69, 3.86)	1	1.13 (0.74, 1.64)
	$\sigma_{23}$	0.9	2.18 (1.11, 3.6)	0.19	0.36 (-0.88, 2.39)	-0.13	0.26 (-0.2, 0.89)
	$\sigma_{24}$	0.42	0.87 (0.27, 2.01)	0.7	1.34 (0.31, 3.68)	0.82	1.1 (0.73, 1.65)
	$\sigma_{33}$	1	2.48 (1.3, 4.23)	1	1.67 (0.9, 4.49)	1	2.03 (1.36, 3.29)
	$\sigma_{34}$	0.11	0.92 (0.25, 2.08)	-0.12	-0.02 (-1.51, 1.23)	0.08	0.64 (0.16, 1.37)
	$\sigma_{44}$	1	1.75 (1.04, 2.91)	1	1.44 (0.55, 3.8)	1	1.41 (1.01, 2.12)
	$\psi_1$	-0.33	-0.51 (-1.53, 0.38)	0.67	0.28 (-0.92, 1.65)	-1	0.15 (-0.57, 1.07)
	$\psi_2$	-0.33	-0.31 (-1.39, 0.91)	0.67	0.43 (-1.21, 1.7)	-1	0.18 (-0.62, 1.07)
	$\psi_3$	-0.33	-0.3 (-1.65, 1.13)	0.67	-0.06 (-1.7, 1.26)	-1	0.66 (-0.93, 1.47)
	$\psi_4$	-0.33	-0.5 (-1.6, 0.84)	0.67	0.05 (-0.85, 1.71)	-1	0.34 (-0.35, 1.01)
Multinom.	$\delta_{11}$	-0.87	-0.36 (-1.27, 0.27)	-0.87	-0.36 (-1.27, 0.27)	-0.87	-0.36 (-1.27, 0.27)
	$\delta_{12}$	0.22	-0.33 (-1.5, 0.96)	0.22	-0.33 (-1.5, 0.96)	0.22	-0.33 (-1.5, 0.96)
	$\delta_{21}$	0.6	0.98 (0.34, 1.48)	0.6	0.98 (0.34, 1.48)	0.6	0.98 (0.34, 1.48)
	$\delta_{22}$	-0.2	-0.19 (-0.87, 0.74)	-0.2	-0.19 (-0.87, 0.74)	-0.2	-0.19 (-0.87, 0.74)
Clustering	$\pi_l$	0.26	0.27 (0.24, 0.3)	0.14	0.14 (0.12, 0.17)	0.6	0.59 (0.55, 0.62)