Simulation Tables

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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 100. Missingness mechanism was MAR and P(miss) = 0. Model results for the multivariate skew normal (MSN) and multivariate normal (MN) mixtures are presented.

		Class 1			Class 2			Class 3		
Component	Param.	True	MSN Est. (95% CrI)	MN Est. (95% CrI)	True	MSN Est. (95% CrI)	MN Est. (95% CrI)	True	MSN Est. (95% CrI)	MN Est. (95% CrI)
MVSN Regression	β_{11}	-3.07	-2.7 (-3.27, -2.34)	-3.44 (-3.76, -3.11)	0.42	0.9 (-0.06, 1.7)	0.82 (0.45, 1.19)	2.46	2.23 (1.75, 2.56)	1.3 (1.06, 1.54)
	β_{21}	-2.04	-1.99 (-2.17, -1.82)	-1.96 (-2.13, -1.8)	-0.31	-0.26 (-0.44, -0.02)	-0.27 (-0.43, -0.08)	3.26	3.27 (3.16, 3.38)	3.28 (3.16, 3.4)
	β_{31}	-3.03	-3.14 (-3.55, -2.77)	-3.41 (-3.74, -3.08)	0.34	0.49 (-0.41, 1.35)	0.62 (0.23, 0.94)	2.93	2.77 (2.05, 3.09)	1.82 (1.61, 2.07)
	β_{41}	-3.26	-3.24 (-3.4, -3.07)	-3.25 (-3.42, -3.09)	-0.63	-0.59 (-0.77, -0.38)	-0.6 (-0.76, -0.42)	2.53	2.54 (2.43, 2.65)	2.55 (2.45, 2.67)
	β_{12}	-3.12	-3.48 (-3.88, -2.82)	-3.44 (-3.71, -3.18)	0.09	0.51 (-0.32, 1.27)	0.4 (0.04, 0.72)	2.67	2.22 (1.4, 2.57)	1.54 (1.31, 1.77)
	β_{22}	-2.61	-2.62 (-2.77, -2.48)	-2.62 (-2.76, -2.5)	-0.37	-0.35 (-0.52, -0.15)	-0.34 (-0.51, -0.18)	2.1	2.07 (1.96, 2.18)	2.08 (1.96, 2.18)
	β_{32}	-2.84	-2.8 (-3.4, -2.36)	-3.29 (-3.59, -2.97)	-0.06	0.24 (-0.71, 1.12)	0.26 (-0.1, 0.62)	1.89	1.57 (1.07, 1.87)	0.72 (0.51, 0.94)
	β_{42}	-2.8	-2.62 (-2.79, -2.48)	-2.65 (-2.8, -2.49)	0.09	0.14 (-0.06, 0.34)	0.16 (-0.01, 0.32)	3.38	3.35 (3.24, 3.45)	3.35 (3.24, 3.46)
	Ω_{11}	1.44	2 (1.41, 2.77)	1.48 (1.21, 1.83)	1.11	1.46 (1.03, 4.89)	1.25 (0.95, 1.68)	2.78	2.68 (2.03, 3.55)	1.74 (1.53, 1.99)
	Ω_{12}	0.94	1.1 (0.72, 1.65)	0.9 (0.69, 1.22)	0.61	0.8 (0.42, 3.8)	0.61 (0.4, 0.95)	2.28	2.23 (1.57, 3.01)	1.28 (1.08, 1.5)
	Ω_{13}	0.69	0.49 (0.12, 0.96)	0.48 (0.3, 0.71)	0.36	0.49 (0.11, 2.99)	0.3 (0.1, 0.56)	2.03	1.62 (1.02, 2.36)	0.93 (0.75, 1.15)
	Ω_{14}	0.57	0.81 (0.36, 1.41)	0.46 (0.28, 0.69)	0.24	0.28 (-0.13, 3.07)	0.1 (-0.1, 0.34)	1.9	1.58 (1.03, 2.28)	0.78 (0.61, 0.97)
	Ω_{22}	1.44	1.5 (1.15, 1.98)	1.42 (1.16, 1.74)	1.11	1.28 (0.91, 4.02)	1.08 (0.81, 1.42)	2.78	2.66 (1.96, 3.5)	1.71 (1.47, 1.95)
	Ω_{23}	0.94	0.75 (0.51, 1.12)	0.77 (0.57, 1.01)	0.61	0.77 (0.45, 3.15)	0.66 (0.44, 0.94)	2.28	1.89 (1.28, 2.58)	1.18 (0.98, 1.38)
	Ω_{24}	0.69	0.78 (0.49, 1.23)	0.63 (0.44, 0.88)	0.36	0.41 (0.07, 2.85)	0.27 (0.06, 0.5)	2.03	1.77 (1.19, 2.41)	0.94 (0.76, 1.16)
	Ω_{33}	1.44	1.12 (0.86, 1.6)	1.12 (0.91, 1.37)	1.11	1.16 (0.8, 3.28)	0.97 (0.75, 1.3)	2.78	2.19 (1.66, 3.03)	1.67 (1.47, 1.9)
	Ω_{34}	0.94	0.7 (0.43, 1.16)	0.71 (0.54, 0.95)	0.61	0.62 (0.28, 2.67)	0.51 (0.33, 0.77)	2.28	1.78 (1.22, 2.4)	1.17 (1, 1.38)
	Ω_{44}	1.44	1.56 (1.15, 2.27)	1.28 (1.07, 1.56)	1.11	1.21 (0.8, 3.49)	1.05 (0.81, 1.4)	2.78	2.36 (1.77, 3.05)	1.65 (1.44, 1.89)
	α_1	-0.39	-1.12 (-1.99, -0.01)	0 (0, 0)	0.21	-0.37 (-1.63, 1.28)	0 (0, 0)	-0.69	-0.58 (-1.32, 0.03)	0 (0, 0)
	α_2	-0.19	0.16 (-0.85, 0.98)	0 (0, 0)	0.11	0.52 (-0.99, 2.7)	0 (0, 0)	-0.35	-0.65 (-1.58, 0.55)	0 (0, 0)
	α_3	-0.19	0.88 (-1.11, 1.66)	0 (0, 0)	0.11	-0.62 (-1.77, 1.04)	0 (0, 0)	-0.35	0.53 (-0.9, 1.29)	0 (0, 0)
	α_4	-0.39	-0.99 (-2.24, 0.42)	0 (0, 0)	0.21	0.06 (-1.46, 1.77)	0 (0, 0)	-0.69	-0.79 (-1.59, 0.03)	0 (0, 0)
Multinom.	δ_{11}	-0.5	-0.29 (-0.54, -0.05)	0.45 (0.22, 0.68)	-0.5	-0.29 (-0.54, -0.05)	0.45 (0.22, 0.68)	-0.5	-0.29 (-0.54, -0.05)	0.45 (0.22, 0.68)
	δ_{12}	0.33	0.12 (-0.24, 0.48)	0.4 (0.04, 0.73)	0.33	0.12 (-0.24, 0.48)	0.4 (0.04, 0.73)	0.33	0.12 (-0.24, 0.48)	0.4 (0.04, 0.73)
	δ_{21}	0.36	0.33 (0.12, 0.53)	0.6 (0.38, 0.83)	0.36	0.33 (0.12, 0.53)	0.6 (0.38, 0.83)	0.36	0.33 (0.12, 0.53)	0.6 (0.38, 0.83)
	δ_{22}	0.96	0.98 (0.69, 1.28)	0.42 (0.12, 0.77)	0.96	0.98 (0.69, 1.28)	0.42 (0.12, 0.77)	0.96	0.98 (0.69, 1.28)	0.42 (0.12, 0.77)
Clustering	π_l	0.25	0.25 (0.22, 0.27)	0.26 (0.23, 0.29)	0.19	0.18 (0.15, 0.21)	0.18 (0.15, 0.21)	0.56	0.57 (0.55, 0.59)	0.56 (0.53, 0.6)