Simulation Tables

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Table 1: Model results for simulated data with n = 1,000, J = 4, p = 2, K = 3, r = 2. 1,000 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}	11	11.07 (10.74, 11.39)	9.42 (8.91, 9.77)	-5	-4.95 (-5.2, -4.68)	-4.11 (-4.33, -3.86)	-10	-10.3 (-10.56, -10.01)	-8.37 (-8.86, -0.65)
	β_{21}	12	12.02 (11.87, 12.17)	11.98 (11.77, 12.18)	-4	-4 (-4.1, -3.89)	-3.98 (-4.09, -3.87)	-11	-11 (-11.19, -10.82)	-10.85 (-11.1, 0.61)
	β_{31}	13	13.06 (12.75, 13.36)	11.39 (10.7, 11.78)	-3	-2.97 (-3.25, -2.68)	-3.74 (-3.99, -3.5)	-12	-11.9 (-12.22, -11.56)	-10.29 (-10.78, -0.14)
	β_{41}	14	14.06 (13.91, 14.22)	14.02 (13.78, 14.22)	-2	-1.96 (-2.07, -1.86)	-1.97 (-2.08, -1.84)	-13	-13.04 (-13.25, -12.87)	-12.89 (-13.13, 0.59)
	β_{12}	2	2.11 (1.82, 2.35)	0.42 (0.03, 0.83)	5	5.16 (4.88, 5.47)	5.83 (5.59, 6.07)	-2	-1.86 (-2.21, -1.52)	-0.35 (-0.77, 0.16)
	β_{22}	2	2.03 (1.88, 2.17)	2.02 (1.86, 2.22)	5	4.96 (4.86, 5.06)	4.96 (4.84, 5.07)	-2	-1.97 (-2.18, -1.79)	-1.89 (-2.11, 0.02)
	β_{32}	2	2.13 (1.8, 2.43)	0.49 (0.14, 0.86)	5	5.22 (4.96, 5.49)	4.23 (3.96, 4.5)	-2	-1.82 (-2.14, -1.5)	-0.37 (-0.77, 0.16)
	β_{42}	2	2.08 (1.93, 2.23)	2.08 (1.92, 2.28)	5	4.97 (4.86, 5.08)	4.96 (4.83, 5.08)	-2	-1.93 (-2.13, -1.77)	-1.84 (-2.04, 0.04)
	Ω_{11}	5	4.99 (3.84, 6.52)	3.08 (2.69, 4.16)	2	1.95 (1.52, 2.52)	1.38 (1.2, 1.59)	5	6.27 (4.84, 7.88)	3.49 (2.89, 186.69)
	Ω_{12}	4.5	4.55 (3.49, 5.88)	2.76 (2.39, 3.55)	-0.5	-0.51 (-0.83, -0.22)	0.2 (0.05, 0.36)	4.5	4.95 (3.78, 6.43)	3.02 (2.48, 215.36)
	Ω_{13}	4.25	4.53 (3.48, 5.85)	1.9 (1.58, 2.46)	1.25	1.08 (0.74, 1.53)	0.38 (0.24, 0.54)	4.25	4.7 (3.56, 6.04)	1.86 (1.42, 8.74)
	Ω_{14}	4.12	4.33 (3.31, 5.57)	1.78 (1.46, 2.24)	-0.88	-1.08 (-1.5, -0.75)	-0.41 (-0.58, -0.26)	4.12	4.51 (3.43, 5.69)	1.72 (1.29, 12.25)
	Ω_{22}	5	5.09 (3.98, 6.55)	3.43 (3.01, 4.23)	2	1.99 (1.53, 2.51)	1.43 (1.22, 1.67)	5	4.87 (3.75, 6.33)	3.71 (3.09, 253.61)
	Ω_{23}	4.5	4.77 (3.69, 6)	2.13 (1.78, 2.7)	-0.5	-0.46 (-0.75, -0.18)	0.05 (-0.1, 0.2)	4.5	4.29 (3.23, 5.61)	2.02 (1.55, 13.33)
	Ω_{24}	4.25	4.38 (3.39, 5.68)	1.86 (1.53, 2.39)	1.25	1.45 (1.04, 1.89)	0.64 (0.48, 0.83)	4.25	4.01 (3.04, 5.19)	1.78 (1.35, 16.8)
	Ω_{33}	5	5.47 (4.3, 6.67)	2.55 (2.23, 3.2)	2	1.73 (1.36, 2.3)	1.41 (1.22, 1.64)	5	4.79 (3.6, 6.24)	2.44 (1.99, 5.81)
	Ω_{34}	4.5	4.8 (3.7, 6.06)	1.99 (1.69, 2.68)	-0.5	-0.68 (-1.07, -0.37)	0.14 (-0.01, 0.3)	4.5	4.25 (3.2, 5.45)	1.94 (1.55, 5.3)
	Ω_{44}	5	5.17 (3.96, 6.69)	2.45 (2.14, 3.79)	2	2.34 (1.8, 2.97)	1.57 (1.37, 1.83)	5	4.64 (3.54, 5.92)	2.37 (1.93, 5.68)
	α_1	-0.99	-0.81 (-2.12, 0.05)	0 (0, 0)	0.85	1.05 (0.37, 1.91)	0 (0, 0)	0.99	2.82 (1.21, 4.3)	0 (0, 0)
	α_2	-0.5	-0.22 (-1.3, 0.75)	0 (0, 0)	-1.28	-1.29 (-2.22, -0.5)	0 (0, 0)	0.5	-0.07 (-1.14, 1.13)	0 (0, 0)
	α_3	-0.5	-0.96 (-2.14, 0.01)	0 (0, 0)	1.28	1.16 (0.47, 2.06)	0 (0, 0)	0.5	0.08 (-0.99, 1.46)	0 (0, 0)
	α_4	-0.99	-1.18 (-2.44, -0.06)	0 (0, 0)	-0.85	-0.91 (-1.76, -0.16)	0 (0, 0)	0.99	1.1 (0.07, 2.33)	0 (0, 0)
Multinom.	δ_{11}	-0.08	-0.07 (-0.27, 0.12)	-0.54 (-0.77, -0.32)	-0.08	-0.07 (-0.27, 0.12)	-0.54 (-0.77, -0.32)	-0.08	-0.07 (-0.27, 0.12)	-0.54 (-0.77, -0.32)
	δ_{12}	0.51	0.25 (-0.04, 0.53)	-0.26 (-0.6, 0.05)	0.51	0.25 (-0.04, 0.53)	-0.26 (-0.6, 0.05)	0.51	0.25 (-0.04, 0.53)	-0.26 (-0.6, 0.05)
	δ_{21}	-0.97	-0.71 (-0.95, -0.48)	-0.07 (-0.28, 0.14)	-0.97	-0.71 (-0.95, -0.48)	-0.07 (-0.28, 0.14)	-0.97	-0.71 (-0.95, -0.48)	-0.07 (-0.28, 0.14)
	δ_{22}	0.84	0.39 (0.09, 0.71)	0.24 (-0.04, 0.5)	0.84	0.39 (0.09, 0.71)	0.24 (-0.04, 0.5)	0.84	0.39 (0.09, 0.71)	0.24 (-0.04, 0.5)
Clustering	π_l	0.38	0.38 (0.38, 0.38)	0.38 (0.13, 0.41)	0.4	0.39 (0.39, 0.4)	0.39 (0.36, 0.43)	0.23	0.23 (0.22, 0.23)	0.23 (0.2, 0.44)